NEW REMEDIES.

AN ILLUSTRATED MONTHLY TRADE JOURNAL OF

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

VOL. VII., NO. 8. WHOLE NO. 50.

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PUBLISHED BY

WILLIAM WOOD & CO., No. 27 Great Jones St., N. Y.

AUGUST 15, 1878.

SUBSCRIPTION PRICE, per year, - - - - - $1.50
SINGLE COPIES, - - - - - - - - - .15

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Advertisements, according to location, etc., Thirty, Forty, and Fifty cents per line nonpareil type, each insertion.

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EDITORIAL.

THE first Tuesday of September, it will be remembered, is the day appointed for the meeting of the American Pharmaceutical Association at Atlanta, Georgia ; but in view of the epidemic of yellow fever which now prevails in some of the southern cities, the Executive Committee of the Association has published a circular, asking the opinions of the members concerning the propriety of—1st, omitting the holding of the meeting altogether ; 2d, having it in some Western city instead of at Atlanta ; or, 3d, postponing it until some time in November, when it may be held at Atlanta with safety.

We are inclined to favor the last of the three, because it was considered desirable, for many reasons, that the next meeting should be held in the South. Since Atlanta offers as many inducements and is quite as accessible and appropriate for the purpose as any Southern city, and as it cannot be guaranteed that yellow fever may not be quite as prevalent next year as it is this, we see no advantage to be gained by omitting the meeting altogether. As there is no business, of which we are aware, that requires the holding of the meeting in September, the postponement of it until November, when the frosts will have arrested the development of the fever germs, appears to us far preferable to the plan of changing the place of meeting. It is true that the increase of business to be looked for at home may prevent the attendance of many who would be better able to go next month, but the reasons which call for a meeting this year in a southern city are of more general importance.

WE have experienced so much difficulty in sending samples for competitive analysis through the mails, owing to the present regulations governing the postal service, and have learned from so many of those who have undertaken to compete for the prizes, of circumstances which have obliged them to give up further competition, that we have concluded to abandon this feature and publish instead a series of papers on the Analysis of Pharmacopœial Preparations.

Mr. Henry B. Parsons, lately Assistant in the School of Pharmacy of the University of Michigan, and now one of the chemists of the Department of Agriculture in Washington, has thus far conducted this department, and will continue to do so under the new arrangement.

We hope to render this feature of the journal of practical value to those pharmacists and physicians who depend upon manufacturers for a certain proportion of their pharmacopœial preparations, and who take sufficient interest in the quality of their remedies to endeavor to arrive at some definite knowledge of their composition.

THAT there *are* dealers in drugs who neither know nor seem to care about the quality of the medicines they dispense is the mildest conclusion at which we can arrive after reading the opening paragraph in Mr. Parson's paper on page 245, but we believe that this class is neither numerous nor increasing. Each year shows a larger attendance at the Pharmaceutical Colleges, and from none of these are unqualified students likely to be graduated.

Where competition is slight, as in small towns, and thinly settled neighborhoods, the unqualified pharmacist is most likely to flourish ; when, however, a more competent man competes with him him for the patronage of the field, the latter is pretty sure, in the long run, to win, and this process will, in time, secure the "survival of the fittest."

We recommend a consideration of this fact to those who, without a proper knowledge of pharmacy and chemistry, go into the "drug business," with a stock of cheap galenical preparations, and a "job lot" of crude drugs that may be either good, bad, or indifferent, so far as they are able to judge, and who would prefer to deal in proprietary remedies and soda water, rather than devote any time to acquiring a good knowledge of their business. For a time they may thrive, but when a properly educated and conscientious pharmacist locates in their neighborhood, their days will be numbered.

Valuable as the course of instruction in a well-appointed college may be to a student of chemistry, there are still many things quite readily learned with the facilities at hand in the most

simply appointed "drug store;" and even now there is no better place in which to acquire the details of materia medica and practical pharmacy when one chooses to make use of his advantages.

THE month does not pass without a letter from some unhappy doctor or druggist who protests against the use of the metric system in our journal, declaring the old method of weighing and measuring to be good enough for him, and that life is too short to spend it in learning every new-fangled notion that arises. We are pleased to think that the number of these persons is rapidly diminishing; certainly the action of some of our Western exchanges will oblige them to become familiar with the system, or choose other sources of information. Two journals have adopted the metric system exclusively, publishing with each number a table for reference, and obliging their readers to "take that or nothing." For the consolation of the latter, it may be said that the ordeal is not half so difficult as they seem to think.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

BERBERINA PHOSPHATE.

BY HENRY B. PARSONS and THEO. J. WRAMPELMEIER.

SOME months since, one of us (Parsons) reported a process for making a soluble phosphate of berberina (Proc. Mich. Phar. Assn., Oct., 1877). Since then an investigation has been conducted by Mr. Wrampelmeier, having for its object the determination of the chemical formula of the salt as made by Parson's process. It is proposed in this article to report the work already accomplished, and show where more work may be done in the future.

The alkaloid berberina ($C_{20}H_{17}NO_4$) is quite widely distributed, both geographically and as regards the number of plants in which it is found. It is most often found in plants of the families Ranunculaceæ and Berberidaceæ. It occurs in the roots, and gives to them its own orange color and bitter taste. Its cheapest source in this country is the roots of Hydrastis Canadensis, commonly known as golden seal, tumeric root, or yellow root. Its salts, the muriate and acid sulphate, have been somewhat used by eclectic and other practitioners, both internally and externally. Their internal administration has been followed by good effects where tonic treatment was indicated. Their antiperiodic action has been asserted to be equal to that of quinia sulphate, but this statement lacks confirmation. In cases of diarrhœa they have been efficacious. As local applications, their aqueous solutions (to which glycerin is usually added) have been successfully used in treatment of gonorrhœa and similar inflammatory diseases. They have been used as gargles in sore throat with beneficial results. The great obstacle to the use of these two salts is their very sparing solubility in water. For local applications, especially, this is a great drawback. The phosphate and hypophosphite are freely soluble in water, and manufacturers have already begun to place them on the market. In several cases so-called phosphates have been found on analysis to contain no trace of phosphoric acid. To make true phosphate, freely soluble, of definite composition, and by a cheap and reliable process, was the problem presented a year since. As a partial solution of this problem this paper is presented. The common method of making berberina salts is to exhaust finely-powdered hydrastis root either with water, water slightly acidulated, or with alcohol. The large amount of percolate thus obtained is reduced to a manageable bulk by evaporation, and the solution acidulated with the proper acid. Upon standing some hours, the salt crystallizes out, owing to this peculiarity, viz.: that berberina salts are very sparingly soluble in strongly acidulated solutions.

For the preparation of such sparingly soluble salts as the sulphate, muriate, and nitrate, probably no better or cheaper process could be devised. In the case of the phosphate, there are two serious objections to this plan:

Firstly. The use of phosphoric acid is very expensive, as an excess is required.

Secondly. The greater solubility of the phosphate results in more waste than is experienced in making the less soluble salts.

To obviate these difficulties, Dr. Thos. L. A. Greve, of Cincinnati, Ohio, proposed in the *Eclectic Medical Journal*, July, 1877, to make the phosphate by boiling the ordinary berberina sulphate ($C_{20}H_{17}NO_4.H_2SO_4$) with bone ash ($Ca_3(Po_4)_2$). This process furnishes a salt more soluble than the acid sulphate, but a sample, upon careful analysis, was found to contain only a *faint trace* of phosphoric acid, and that as impurity in the form of bone ash. The quantitative analysis showed it to be a more soluble *sulphate*, agreeing closely with the formula, $2C_{20}H_{17}NO_4.H_2SO_4$.

The idea then suggested itself, that, heating together a *soluble phosphate* of some base capable of forming an *insoluble sulphate* with berberina sulphate, must result in the formation of berberina phosphate in solution and a precipitate of the insoluble metallic sulphate.

By treating bone ash with the requisite amount of sulphuric acid, a soluble calcium phosphate was first made, and the resulting insoluble calcium sulphate removed by filtration. Thus:

$$\left.\begin{matrix}310 \text{ parts} \\ Ca_3(PO_4)_2\end{matrix}\right\} + \left.\begin{matrix}196 \text{ parts} \\ 2H_2SO_4\end{matrix}\right\} = \left.\begin{matrix}234 \text{ parts} \\ CaH_4(PO_4)_2\end{matrix}\right\} + \left.\begin{matrix}272 \text{ parts} \\ 2CaSO_4\end{matrix}\right\}$$

Due allowance must be made if the acid used is

under 100 per cent real acid and *ten* per cent allowed for impurities in the bone ash. It was found that precipitated phosphate of calcium would not answer. Probably this was due to its not being entirely tri-metallic phosphate.

By heating together a given weight of berberina sulphate with an excess of solution of calcium acid phosphate, the predicted reaction did take place. By evaporating nearly to dryness on the water bath, and treating with hot diluted alcohol, the calcium sulphate and excess of calcium phosphates were left in residue, while the berberina phosphate was readily dissolved. They were separated by filtration.

The filtrate was evaporated nearly to dryness, and treated with cold stronger alcohol, when the berberina phosphate separated as a canary-yellow flocculent powder, which was dried on paper at a low heat.

The salt thus made was very readily and freely soluble in cold water, a little less soluble in cold diluted alcohol, more freely in hot diluted alcohol, sparingly soluble in cold stronger alcohol, more soluble when heated, not sensibly soluble in absolute ether and chloroform. In all these particulars it corresponds closely with the phosphate made by precipitation. Upon standing in loosely corked bottles, the salt absorbs water, but does not deliquesce, and changes in color from canary to orange-yellow. It may be obtained in irregular prismatic crystals by crystallizing from a hot, concentrated, alcoholic solution. These crystals do not absorb water as readily as does the loose powder. In order to determine the composition of the salt so made when in powder, Mr. Wrampelmeier carefully prepared a sample as above explained, except that he used barium acid phosphate ($BaH_4(PO_4)_2$) in place of the calcium acid phosphate. The salt was also treated in water solution with pure animal charcoal which removed a little foreign coloring matter.

The following is the summary of his work :

I. *Loss of Weight at* 100° *C.*

It was necessary to dry the salt at 65° to 70° C., in test-tubes, to obtain a constant weight. This was a tedious operation, requiring several weeks. In weighing, it was absolutely necessary to closely cork the test-tubes, so great was the affinity of the salt for water.

Upon raising the heat above 70° C., the salt became olive-green in color, and after heating for some time at 100° C., it ceased to lose weight.

.2803 grm. lost .0181 grm.=6.45%
.3034 " " .0200 " =6.59%

Loss at 100° C.—mean— =6.52%

II. *Estimation of Phosphoric Acid* (H_3PO_4).

The organic matter was destroyed by heating with a mixture of sulphuric and nitric acids. The phosphoric acid was estimated as magnesium pyrophosphate ($Mg_2P_2O_7$), according to Fresenius.

.3034 grm. gave .2145 grm. $Mg_2P_2O_7$=1894 of H_3PO_4
.2803 " " .2000 " " =1766 " "

These amounts of H_3PO_4 are equivalent to 62.39 and 62.96 per cent of the phosphate taken, the mean being 62.67 per cent.

III. *Estimation of Berberina.*

A given weight of the salt was dissolved in water and precipitated by platinic chloride. The precipitate was washed with water, dried at 100° C., weighed in a tared filter, then carefully ignited in a crucible, and the residual platinum weighed. The symbol for the precipitate caused by platinic chloride is, according to Perrin (*Jour. Ch. Soc.*, XV., p. 345), $2C_{20}H_{17}NO_4.2HCl.PtCl_4$. Of this precipitate 18.22 per cent is platinum, and 61.899 per cent is berberina.

.2517 grm. gave a prec.=.1312 grm.=.0812 of berberina.
.1727 " " " =.0900 " =.0557 " "
.1224 " " " " =.0640 " =.0396 " "

By calculation from residual platinum (after deducting weight of filter ash), the amounts of berberina were .0815, .0526, and .0390 respectively. The percentage of berberina in the phosphate was calculated from these results, rather than from the weights of the precipitates, for the reason that the use of tared filters introduces a source of error not present in the case of the residual platinum. Still the weights of the precipitates serve as checks upon the calculations made, and correspond quite closely. The percentages of berberina calculated from these figures are 32.37, 30.45, and 31.86, and the mean 31.56.

IV. *Estimation of Total Nitrogen.*

This estimation was made as a check upon the estimation of berberina by the platinum process. Weighed amounts were ignited in combustion-tubes with soda-lime, and the gases passed through carefully standardized, freshly-made volumetric solution of oxalic acid. The amount of acid neutralized was determined by volumetric alkali.

.2945 grm. neutralized .0186 of $H_2C_2O_4.2H_2O$=.0041+ of N.
.4028 grm. neutralized .0273 of $H_2C_2O_4.2H_2O$=.006+ of N.

From these amounts of N, we find the amounts of berberina to be .09890 and .14516.

Percentages of nitrogen 1.39 and 1.48 average 1.43.
" " berberina 33.26 and 35.41 " 34.33.

It will be observed that one-tenth of one per cent variation in the amount of nitrogen makes nearly three per cent difference in the percentage of berberina, because of the small proportion of nitrogen in berberina. Hence the determination of nitrogen cannot give the absolute amounts of berberina, but, as above stated, may serve as checks upon other work.

V. *Summary.*

Water (H_2O) mean of 2 exp.	6.52
Phosphoric acid (H_3PO_4) mean of 2 exp.	62.67
Berberina ($C_{20}H_{17}NO_4$) mean of 3 exp.	31.56
	100.75

Dividing the percentages by the molecular weights—

Water 6.52÷18=.36=4.
Phosphoric acid 62.67÷98=.64=7.
Berberina 31.56÷335=.094=1.

From these results we deduce the formula for berberina phosphate $C_{20}H_{17}NO_4.7H_3PO_4.4H_2O$.

A comparison of the percentages found by analysis with the theoretical percentages serves to confirm this formula.

	Calculated.	*Found.*
Water ($4H_2O$)	6.58	6.52
Phosphoric acid ($7H_3PO_4$)	62.76	62.67
Berberina ($C_{20}H_{17}NO_4$)	30.65	31.56
Total	99.99	100.75

This formula seems, at first sight, an improbable one; but any person who will take the pains to look up the formulæ for the phosphates of other alkaloids, will be surprised at their lack of uniformity, and at the fact that alkaloids exhibit no particular quantivalence when combined with phosphoric acid.

From this symbol we deduce the following equation in explanation of the formation of the salt.

$$C_{20}H_{17}NO_4.H_2SO_4 + 6[BaH_4(PO_4)_2] = C_{20}H_{17}NO_4.7H_3PO_4 + BaSO_4 + 5BaHPO_4.$$

VI. *Solubility in Water.*

The salt was first dried at 70° C., and a saturated, cold-water solution made. 12.3285 grm. of this solution evaporated at 70° C. left a residue weighing 1.0785 grm. Hence one part of the salt is soluble in 10.43 parts of cold water. The salt previously dried at 100° C. was found to be soluble in 21.52 parts of cold water, and the sulphate in 68 parts.

An investigation of the amount of berberina precipitated by 1 cc. Mayer's solution of potassic mercuric iodide, together with the formula for the precipitate, would be valuable. Some work has already been done by L. F. Beach in this direction (*Am. Jour. Ph.*, 1876), but work done by Mr. Wrampelmeier leads him to think the work of Mr. Beach only approximately correct. The close of the school year prevented so full an investigation as would warrant the publication of his results.

School of Pharmacy,
University of Michigan, June, 1878.

Method for Abstracting Oxygen from the Air.

Gust. A. Treutler of Blasewitz, Germany, has obtained a patent on a new process for deoxidizing atmospheric air. This consists in forcing air through a system of three small revolving casks, loosely packed with turnings and borings of iron and saw-dust, and half-filled with solution of ferrous (green) sulphate. The object of the saw-dust is to retain some of the solution in that part of the cask, which is at any time uppermost and therefore free from liquid, and thereby to offer a larger surface of the solution to the action of the oxygen. The oxygen in air may thereby be reduced to 2½ per cent. The residual gas (97½ per cent nitrogen, etc.) may then be filled into gas-holders or compressed in cylinders.

The Artificial Production of Indigo-blue.

The riddle is solved at last! Indigo has ceased to be a mystery, and it will not be long before it will be made artificially on a large scale. Our readers will, no doubt, recollect what a tremendous revolution the discovery of artificial alizarine produced in the dyeing-industry, and how the growth of madder was made unprofitable in many countries, so tnat it is even now gradually dwindling away. The manufacture of indigo in India, Java, South America, and other countries requires vast tracts of country, and the eventual downfall of this industry will become a serious question of political economy. Nevertheless, the progress of human knowledge cannot be stayed, unless the social fanatics should perforce some of these days succeed in passing laws to abolish science and thought.

In the *Berichte d. Deutsch. Chem. Ges.*, 1878, p. 1228, Prof. Ad. Baeyer, of Munich, announces that *isatin*, the first oxidation-product of indigo, is readily obtained artificially by oxidizing amido-oxindol, the artificial production of which had previously already been discovered, by means of ferric or cupric chloride, or by means of nitrous acid. The re-conversion of *isatin* into *indigo* is a well-known process; but the artificial preparation of isatin itself had heretofore baffled all attempts.

A new Bottle-Stopper.

H. Jarck of Flensburg has taken out a German patent (No. 374) for a new kind of bottle-stopper, which may be permanently attached to the neck of a bottle, and permits the passage of liquids by a simple turn of the lateral tube. See the illustration.

Determination of Tannin.

For the determination of tannin in wines or similar liquids, A. Capreni recommends an ammoniacal solution of acetate of zinc, which, he says, gives precipitate of zinc tannate, insoluble in water, ammonia, or in an excess of the reagent. The reagent itself remains unaffected by alcohol, malic or tartaric acids, potassium or

calcium tartrate, glycerin, gelatin, albumen, and ferrous or ferric compound with organic acids. But gallic and succinic acids, glucose and alum solutions produce precipitates which are soluble in an excess of the reagent.

On adding to wine, etc., an excess of the reagent, the newly-formed precipitate carries down with it some of the coloring matter. This may, however, be eliminated by heating the whole, whereby the flocculent precipitate contracts. After cooling, it is collected on a filter and washed with warm water. It is then dissolved in dilute sulphuric acid, and the tannic acid determined by titration with potassium permanganate.

Dr. G. C. Wittstein remarks to this, that it is much simpler to determine in the precipitate the zinc oxide, and to calculate the loss as tannin. This may be done by collecting the precipitate upon a tared filter, washing, drying at 110° C., carefully igniting, and weighing. Or the precipitate is dissolved in dilute sulphuric acid, the solution supersaturated with sodium carbonate, the precipitated zinc carbonate collected on a filter, washed, dried, and ignited.—*Zeitsch. d. Oest. Ap. V.*, 1878, 290.

Duboisia Myoporoides *R. Br.*

In our April number (p. 118), we gave an account of the effects of an extract prepared from the leaves of this plant, which acts as a powerful mydriatic, and is now used in various parts of Australia exclusively, in place of the expensive atropia. A description of the tree has lately been published by Mr. Lanessan in the *Journ. de Pharm. et Chim.*, from which we quote the following:

Duboisia myoporoides R. Brown is a handsome tree, growing to a height of 4 or 5 metres, found in Australia and New Caledonia. The trunk and the larger branches are covered with a thick and fissured corky layer. The branches are erect, and terminate in conical bunches of uniparous cymes of small white flowers, persisting during the greater portion of the year. The leaves are alternate, slightly decurrent, simple, smooth, elliptical-lanceolate, without stipules, and with entire border. Each cyme contains hermaphrodite flowers of different age, and fruits in various stages of development. The entire leaf is 10 to 13 centimetres long, and 1 to 2 cm. wide in the middle. It is thin, but firm, smooth, and glabrous, its middle rib but little projecting. At the height of the flower-bearing branches, the leaves become gradually reduced to thin sessile, elongated, elliptical laminæ, which finally pass into bracts.

The characters of *Duboisia* are such as to make its classification very difficult. Endlicher had placed it among the Scrophulariaceæ; Bentham and Hooker placed it among the Solanaceæ, tribe of Salpiglossideæ, next to *Anthocercis* Labill. Good reasons can be given for both classifications. The plant forms such a close link between the two families that it is impossible to separate it from either. Mr. Gerrard and Mr. Petit have recently extracted from the leaves of this tree an alkaloid, *duboisia*, which has been studied therapeutically by Prof. Gubler. The latter found it to produce similar effects as atropia, but more pronounced and lasting. Half a milligramme ($\frac{1}{134}$ grain) administered subcutaneously, produced dryness of the fauces and troubled vision. Double the quantity produced thirst, acceleration of pulse, dilatation of the pupils, a scarlatinoid rash over the body, and great loss of muscular power, so as to render the lower extremities almost powerless. Among other uses for which this agent appeared to be indicated seemed to be that of

Duboisia Myoporoides *R. Br.*

controlling the excitement in mania or alcoholism. Being put to the test in the case of a patient who could not be calmed by the hypodermic injection of 0.05 gm. ($\frac{3}{4}$ of a grain) of morphia, and a dose of 3 gm. (45 grains) of chloral hydrate, it was found that a milligramme administered hypodermically controlled the excitement absolutely. It was also found to be equally serviceable against the night sweats of consumptives. And as before indicated, it fully replaces atropia as a mydriatic.

Duboisia (the alkaloid) is offered in some continental price-lists at 40 francs per gramme ($15\frac{1}{2}$ grains). This enormous price will, however, not last long, as large invoices of the plant are on their way to Europe.

George's Drug-Press.

THE adjoining illustration represents a drug-press invented by Charles T. George, of Harrisburg, Pa., and described by him as follows :

The press is very simple in its construction and never likely to get out of order. It is open on all sides and easily approached and handled. It is very powerful, and the power is easily applied.

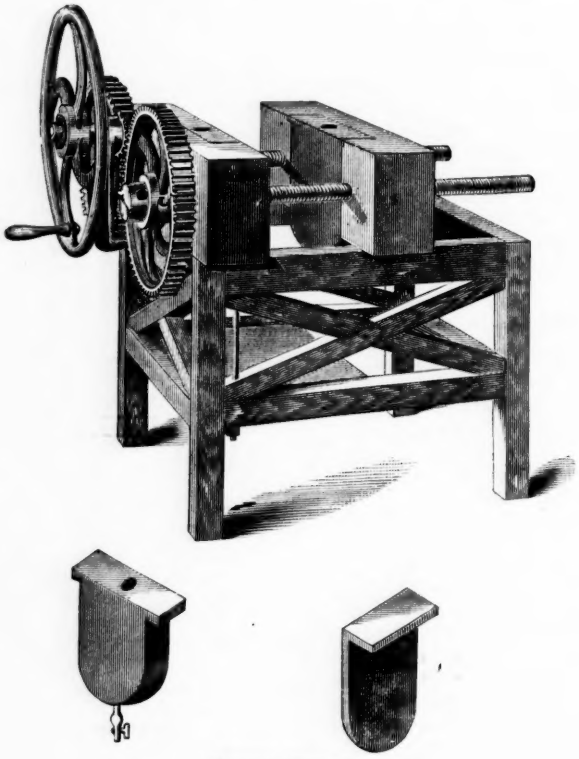
It may be used for all manner of expressions, tinctures, fluid extracts, infusions and decoctions, oils and ointments, as well as all heavy oils gained by expression. Its parts, as will be noticed in the cuts, consist, first, of a heavy frame-work, constituting the table. Two horizontal blocks of wood rest upon the frame, one of which is stationary, the other movable, and both are perforated with two smooth-bored holes at equal distances. Two long iron screws passing through the holes of both blocks, and through two female screws of bell metal, are firmly fixed in the rear of each hole on the movable block.

To the head of each screw is fixed a strong iron cog-wheel ; on the top and between the two cogs, is a small, very strong iron pinion wheel attached to a short shaft, on the end of which is the large iron fly or lever-wheel with a handle.

By turning the fly-wheel, both screws are turned at the same time, and the movable block is consequently drawn with force and certainty against the stationary one.

On the inside of each block is fitted a saddle-shaped hollow iron casting, with brass pet cock at the bottom and an opening at the top (as in the illustrations below the press). These are intended to be filled with hot water during the expression of fixed oils and fatty articles.

Two saddle-shaped boards are used to cover the iron castings, for the expression of tinctures, fluid extracts, and fruit juices, similar to the figure below the press.



George's Drug Press.

The material to be expressed is to be put into a bag of strong material, placed between the two horizontal blocks, and the fly-wheel turned until the material is exhausted, a vessel being placed on the shelf under the material to receive the liquid.

A pound of linseed meal treated by this press will yield three oz. of beautiful oil. (The apparatus is not patented, and any person is at liberty to use it.)

THE COMMERCIAL PRODUCTS OF THE CITRUS FAMILY.

BY CHARLES RICE.

ALTHOUGH there is no lack of numerous and excellent descriptions of the various members of the citrus family, yet there exists no single work of reference which gives, in a condensed manner, anything like a complete survey of the usual commercial products derived from the family, so that it is often necessary to consult a large number of works before the desired information is gained. In the course of such a search it will also be noticed that the different authors make many confusing and even positively contradictory statements, so that it requires considerable labor to get at the exact facts. A concise synopsis of these commercial products, giving their origin, history, and use, will therefore be of sufficient usefulness and interest to warrant its publication. In order to save space, however, all botanical descriptions will be omitted, and only those species will be cited which yield products interesting to the pharmacist and physicians; namely, the following:

Citrus vulgaris Risso—The Bitter Orange.
Citrus Aurantium Risso—The Sweet Orange.
Citrus Limonum Risso—The Lemon.
*Citrus Limetta** Risso—The Lime.
*Citrus Bergamia** var. *vulgaris* R. The Bergamot.
Citrus medica Risso—The Citron.
Citrus Pompelmos Risso—The Shaddock.

I. THE BITTER ORANGE.

Citrus Vulgaris Risso (*C. Bigaradia*[1] Duhamel; *C. Aurantium*[2] var. *α amara* L.). *Habitat:* Northern East Indies, Southern China, and Cochin China. Cultivated in Italy, Portugal, Malta, the Ionian Islands, the Azores, in North Africa, West. Asia, West Indies, etc.

Engl.: Bitter, or Seville, or Bigarade Orange (-tree). *Germ.* Gemeiner *or* Bitterer Pomeranzenbaum. *French:* Bigaradier. *Ital.:* Arancio amaro. *Span.:* Naranjo ágrio. *Port.:* Laranjeira de fructo azedo *or* amargo.

The Leaves (1) are about 10 cm. long, somewhat bitter, strongly odorous when rubbed between the fingers; contain about 0.3 per cent of essential oil. Used in nervous and hysterical affections.

Lat.: Folia Aurantii (Germ. Ph.). *Engl.:* Orange leaves. *Fr.:* Feuilles de Bigaradier. *Germ.:* Pomeranzenblätter, etc.

They yield:

Essence[3] *de Petit Grain* (2) by distillation with water. The young shoots as well as the leaves, both of the *sweet* and the *bitter* orange, are used for this purpose. Compare 11.

Acqua di Vette (3) is the Italian name of the water distilled from these leaves and twigs.

The Unexpanded Flowers (4) have a very agreeable odor when fresh; when dry, they are almost odorless. The commercial flowers are salted. The fresh flowers appear to contain several volatile oils, the finest of which is rather soluble in water; hence genuine orange flower-water has a finer flavor than the artificial. The finer essence is also obtained by the process of enfleurage or maceration (see NEW REM., 1877, 340).

Lat.: Flores Aurantii; the officinal may be derived either from the bitter or the sweet orange). Flores Aurantiæ. Flores Naphæ. *Fr.:* Fleurs de bigaradier (or d'oranger). *Germ.:* Pomeranzenblüthen. *Span.:* Azahar. *Port.:* Flores de Laranjeira.

They yield:

Essence de Néroli Bigarade (5), by distilling the fresh flowers with water. This is called

Essence de Néroli Pétale (6), if, previously to the distillation, the flowers are deprived of the calyx. The product is finer, and naturally more expensive.

The commercial oil is chiefly made in Southern France, at Grasse, Cannes, and Nice, where about 20,000 cwt. of the flowers are annually distilled. The *Essence de Néroli de Paris* (7), which is made about the French capital, is very fine, but is not exported. The petals of the Sweet Orange flower are likewise, at least partly, used in its manu-

[1] The derivation of this word is somewhat uncertain. *Ménage*, in his *Dictionnaire Etymol. de la Langue Fr.*, derives it and all its congeners from the Latin *bis varius* "twice-differing," namely by *shape* and by *color;* but this is far-fetched. It is no doubt the same as *bizarre*, for it is called by this name by several old writers (see *Risso*); and this is originally a Basque wood, *bizarra* "beard," which by long migration has finally reached the seemingly anomalous meaning "queer, capricious;" see *Müller, Etym. Wört. d. Engl. Spr.* 90.

[2] *Aurantium* has nothing in common with the Latin *aurum* "gold." Its true origin has long been shown to be the Arabic *nârandj*. This latter word was brought to Europe by the Moors, whence the Spanish *naranja* and Portuguese *laranja*. Then it became, in Italian, *arancio*, and in Mediævo-Latin, *arangia, arangius, arantia, (malus) anarantia, nerantium, etc.* Up to the importation of the sweet orange into Europe (ab. 1548 A.D.) all these words denoted the bitter orange. Gesner and Belloni already misunderstood the word, and identified it with *mala aurea* "golden apples." So also Ferrari in his work *Hesperides, seu de malorum aureorum usu et cultu*, Rome, 1646. The Byzantine Greeks made of it the words *νεράντζιον, ναράντζι, νεραντζέα*. The Arabic *nârandj* is from the Persian *nârendj*. This word, as well as the fruit, is said to have been brought there about 912 A.D. It is the same as Sanskrit *nâranga*, or *nârangî*, which has been supposed to be a contraction of *nâga-ranga* "snake-color (having)." This is, however, an invention of the Hindu etymologists, who were bound to squeeze the word into a frame which would give *some* sense. The word, no doubt, originated in the old Hindu vernacular, of which we have only traces left. Susruta, whose work was composed at least before 750 A.D., already mentions the word *nârangî*. In the *Madanavinoda* (or *Madana-Pâla-Nighantu*), a Sanskrit medical glossary, composed A.D. 1374 (ed. Calcutta, 1875), we find the word *nâranga* applied to two varieties, one of which may have been the bitter orange or the lemon: "*nâranga* is sour and very sharp; it removes wind and bile; another kind is sweetish-sour, pleasant, hard to digest, etc." (vi. 80, p. 70). The latter appears to be the orange; the former, the lemon.

[3] The French used for these essential oils the term *essence*, instead of *huile* "oil."

* The two species are by many botanists regarded merely as varieties of *C. Limonum* Risso.

facture. Both of the above-mentioned oils are generally adulterated with the essential oil of orange leaf: Essence de Petit Grain (2). The fraud is detected by dropping the oil on sugar, and dissolving this in water. If the latter acquires a bitter taste, the oil was adulterated. More difficult is the detection of oil of bergamot distilled over orange flowers, which is sometimes substituted. According to Flückiger, the oil of neroli commonly sold consists of $\frac{3}{8}$ essence de petit grain (2), $\frac{1}{8}$ essence of bergamot (47), and $\frac{4}{8}$ of true neroli. The pure oil has a brownish hue, showing a violet fluorescence when diluted with alcohol; or, as it is distilled at Nizza, a magnificent blue color, with a red fluorescence (*Flückiger*).

Orange Flower Water (8). This should be prepared from the fresh flowers (U. S.). That prepared from the dry in less fragrant, and that prepared from the essential oil still less so.

Lat.: Aqua Aurantii florum (may be prepared from the flowers of the bitter or sweet orange, U. S., Br., and G. Ph.). Aqua Naphæ (three grades, simplex, duplex, triplex). Aqua Florum Naphæ. *Eng.:* Orange Flower Water. *Fr.:* Eau de Naphe. Eau de Naffe. In Languedoc: Eau de Naphre. *Germ.:* Orangenblüthenwasser. *Ital.:* Acqua Nanpha, corrupt: Lanpha. *Span.:* Agua de Azahar.

The Unripe Fruit[4] (9) is, when dry, from the size of a pea to that of a cherry; round, hard, greenish-brown, or grayish-green, the surface wrinkled from the drying up of the oil-cells. The outer peel contains essential oil, the inner white layer, like all the fruits of the Citrus family, bitter hesperidin. Used to flavor liquors and elixirs (one of which is known as Tinctura episcopalis, Bishop's Elixir), and to make issue-peas. The latter are also made from the unripe sweet orange.

Lat.: Fructus Aurantii immaturi. Aurantia immatura. Baccæ (*or* poma) Aurantiæ immaturæ (-a). Aurantia Curassoventia. *Engl.:* Orange Peas. Curasso Oranges. *Fr.:* Petits Grains (="small grains"). Orangettes. *Ital.:* Aranzinetti. *Span.:* Naranjillas. *Germ.:* Unreife Pomeranze.

Curaçao Peel (10). During the 17th and part of the 18th century, the fruits of a variety of bitter orange growing in Curaçao, and probably also in Barbadoes, which remained green even when ripe, were much esteemed. But what is now known in trade as Curaçao peel in Europe is the rind of an *unripe* French bitter orange, or probably the rind of an orange growing near Grimes, having a permanently green peel.

Lat.: Cortex Curaçao. Cortex Aurantiorum Curassaviensis. *Fr.:* Curaçao des Isles *or* de Hollande; etc.

Orange Peas yielded once

Essence de Petit Grain or *E. d'Orangettes* (11; see 2). Hence the name. This oil has a different flavor from that of the ripe fruit. At present, however, essence de petit grain is made from the leaves and twigs (see above), and is, therefore, a misnomer.

The Ripe Fruit (12) is seldom found whole in the market. It is not eatable, as it is very bitter. The seeds are excessively so.

[4] The Italians comprise all the sour and acid fruits, particularly those of the *Citrus* family, under the name *agrumi*. Agrumi-plantations very generally mean those of the orange, lemon, and citron.

The market is supplied with bitter oranges (and peel) mostly from Sevilla and Malaga (best quality) in Spain, Oporto, St. Ubes, and Faro in Portugal, from Sicily, and from Genoa, Nizza, and Leghorn. Cuba, Jamaica, and Florida also produce bitter oranges.

Lat.: Fructus Aurantii amari. Malus aurantia. *Engl.:* Bitter, Seville, or Bigarade Orange. *Fr.:* Bigarade. *Germ.:* Pomeranze. *Ital.:* Arancio forte, volgare, *or* amaro.

The Peel of the Ripe Fruit (13) appears, at least in the Continental markets, in spongy, pointed-oval, flat or slightly convex pieces, externally greenish or brownish-red and wrinkled, internally dirty-white, having an aromatic and rather bitter taste. The Germ. Phar. directs that, for use, this inner white layer, technically termed *Albedo* ("the whiteness") should be removed by soaking the peel in water, and then taking it off with a knife. The remaining thin yellow skin, constituting about 50 per cent of the weight, is technically called *Flavedo* (14) ("the yellowness"), or more completely

Lat.: Flavedo [corticis] Aurantiorum. Cortex Aurantiorum mundatus *or* expulpatus.

The workmen who peel the fruits often suffer from eruptions on the hands; they are also very subject to disturbances of digestion, dizziness, tinnitus aurium, subsultus tendinum, and even epileptiform convulsions.

Orange Peel of the American Market.—There being a good deal of variety, both in appearance and in origin, of the orange peel in our markets, we shall speak of the commercial bitter as well as sweet peel in this place.

1.) *Bitter Orange Peel*, no matter in what shape it occurs, is mainly distinguishable by its strong odor and taste; when chewed, by the sharp impression it leaves upon the tongue and palate for a considerable time, and by a greater or less degree of bitterness. Some varieties are scarcely at all bitter, but all are, or should be, rich in volatile oil. Standing near two persons, one of whom is chewing sweet and the other bitter orange peel, it is quite easy to distinguish one from the other. The bitter peel is usually much thicker and becomes harder than the other. In color, the bitter peel is either dark-yellow, or brownish-red, or else more or less green. It occurs in the market in three shapes:

a) *In Quarters.*—Either *brownish-red;* from the Sevilla orange, grown in Spain, South France, or West Indies. Most of it reaches our market from Malaga and Jamaica. Or *greenish.* This is the so-called "Curaçao" variety, of French origin, according to *Pharmacographia* and others; but, as we are informed, also grown in Portugal, and exported from Lisbon.

b) *In Ribbons* (*or Shreds*).—The oranges are, in this case, pared with a knife, like an apple, beginning at the apex, and spirally winding around the body of the fruit. The color of these is *greenish*, but most lots are mixed

with *yellowish* ribbons, showing that either several varieties of bitter *ripe* orange have yielded it, or that one and the same variety of orange in different stages of ripeness has been employed.

c) *In Quarters and Ribbons mixed.*—This is generally of the Malaga variety, that is, the brownish-red Sevilla orange. This kind is held a trifle cheaper than either the quarters or ribbons alone, and is mostly used for cutting and grinding.

2) *Sweet Orange Peel* generally has a light yellow to light brownish-yellow color, is less thick than the bitter, does not become readily hard, is free from bitterness, leaves no sharp impression on the tongue, except a mild aromatic flavor, often accompanied by a distinct sweetness. It always appears in quarters, and is imported from Spain, South France, Italy, the West Indies, Florida, etc. However, many packages of sweet orange peel contain occasionally more or less bitter peel, probably owing to the fact that in some places it would not have paid the growers or dealers to pack the bitter peel in special packages.

We have also found orange peel in this market, of which it was quite difficult to decide whether it came from the bitter or the sweet orange. Inquiries on our side have made it probable, that the method of grafting, in use in some European and West Indian orange-growing districts, has produced varieties of orange, the peel of which somewhat partakes of the properties of both the sweet and the bitter orange.

Lat. : Aurantii amari cortex (U. S.). Cortex fructus Aurantii (G. Ph.). Cortex Aurantiorum *or* pomorum Aurantii. Pericapium Aurantii. *Engl.* : Bitter Orange peel. *Fr.* : Ecorces *or* zestes[5] d'Oranges amères. *Germ.* : Pomeranzenschalen.

Candied Orange Peel (15) is made by soaking the peel in water, until the bitterness is extracted; it is then placed into syrup, until it is soft and transparent, taken out, drained, and dried. Used as a sweetmeat.

Lat. : Cortex aurantiorum (or aurantii) conditus.

Orangeat[6] (16) is the candied peel of a variety of bitter orange, namely *Citrus spataforma* Risso.

Lat. : Confectio Aurantiorum. Conditum Aurantiorum.

Essence de Bigarade (17). Prepared from the rind of the scarcely ripe fruit by mechanical means, either by the sponge or the écuelle process,[7] seldom by distillation. It must not be confounded with the Essence de Néroli Bigarade. It is often adulterated with oil of lemon.

Lat. : Oleum Aurantii corticis. *Engl.* : Oil of Bitter Orange-Peel. *Fr.* : Essence de Bigarade. Essence d'Orange(s). *Germ.* : Bittere Pomeranzen[schalen]essenz.

(To be continued.)

[5] The French *zeste* denotes the whole peel or pericarp of the fruit; the inner white layer or "albedo" is called *ziste*.

[6] The terms *orangeat* and *citronnat*, which denote a sweetmeat, must not be confounded with *orangeade* and *citronade*, which, like *lemonade*, denote beverages.

[7] Both processes are well-described in the *Pharmacographia*, pp. 106–107. The *écuelle* is a tinned copper bowl, having concentric rows of spikes on its flat bottom, and a hollow handle with a gutter from it to the edge of the bowl, which serves for emptying the collected oil. The fruits are rolled about on the spikes, and in consequence of the puncturing of the oil cells, the oil escapes. A full description and illustration published in April number, pg. 104.

Pimento as a Revulsive.

To the list of revulsives and local irritants, M. Lardy adds the extract of pimento. The color of the extract, like that of the fruit, is a beautiful red. By being incorporated with a plaster, it may be spread upon cloth or paper, and adheres to the surface of the skin without warming. It acts rapidly, ten to twenty minutes being the usual limit, according to the point of application and sensitiveness of the skin. From the outset it causes heat, redness, and slight smarting. These phenomena increase in degree for about three hours, and then remain stationary. Neither the heat nor smarting are painful, and do not hinder the patient continuing his occupation. There is no itching, and the effect remains localized. Compared with mustard, it is of about half the strength of the latter.

Apparatus for Distilling Volatile Liquids.

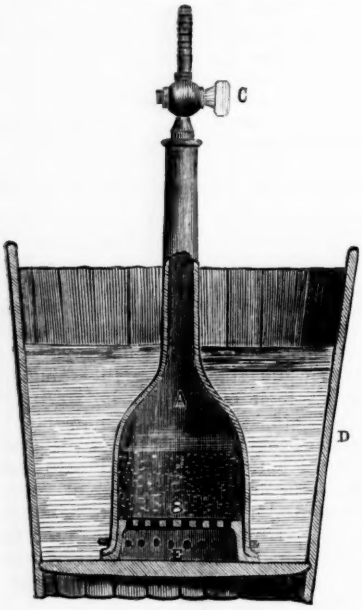
When it is desired to distil off ether, chloroform, or other volatile liquids which hold in solution solid substances (such as alkaloids), the most usual process is to perform this operation in a flask or in a retort. It is, however, impossible to remove the solid residue in any other way than by redissolving it in a small quantity of the menstruum and transferring the solution to a capsule, where it may finally be freed entirely from the liquid. Mr. Yvon recommends to perform this process by means of an alembic, provided with a gutter, to be filled with mercury, into which the edge of the head or cucurbit is to be immersed. The solution to be evaporated may be placed in a capsule inside of the alembic, and, when the distillation is finished, the capsule with the dry residue has simply to be lifted out.—*Journ. de Ph. et de Ch.*, 1878, July.

The Koronico Plant.

John Arthur Francis indorses statements recently made in an English journal with regard to the value of the koronico plant of New Zealand (a species of broom) as an astringent, and the value of its employment in appropriate cases of diarrhœa. He says that it is an old and well-known remedy among the Maories and up-country shepherds, especially for intestinal disturbances arising from drinking stagnant swamp-water in dry seasons. The usual mode of using it is by making a strong infusion of the young leaves.

Iodine in the Treatment of Malarial Fever.

DR. J. NOWODNITSCHAUSKI, who lives in a district in which malarial fever prevails, says, that for a long time he has employed iodine in spirituous solution, and has obtained very favorable results. At intervals of eight hours, he gives ten to twelve drops of tincture of iodine in a half-glass of sweetened water. If the fever is soon checked, the iodine is continued in smaller doses at longer intervals for a considerable period of time. He believes that when it is given in the doses above mentioned, iodine will not rank second to quinia in the treatment of intermittent fever. A cumulative action need not be feared, as the agent is promptly excreted by the kidneys, skin, and salivary glands.—*The Lancet and Clinic* from *St. Pet. Med. Woch.*



A Simple Gas Generator.

THE adjoining cut illustrates a simple contrivance for facilitating the manufacture of any gas capable of being produced by liquid reactions on a small scale. It consists of a bottle-shaped tinned copper vessel, having at its bottom a grate, B. In the receiver, A, is placed the solid material, which, for the production of hydrogen, would be iron filings or zinc. The acidulated water is contained in the vessel, D. On opening the cock, C, the water penetrates at E, passes through the openings in the grate, and acts upon the metal filings. Hydrogen is then discharged and fills the upper tube, escaping at the outlet above. When it is desired to check the production of the gas, the cock is closed and the pressure drives the water out of the receptacle, A, leaving the metal filings dry.

Quinia Tannate in Whooping Cough.

C. F. SWAN, M.D., of South Chicago, Ill., has tried the following formula in an epidemic of whooping cough, and reports through the *Chicago Medical Jour. and Exam.* the results:

Quinia sulphate.... ...4 grams (ʒ i.)
Acid tannic.....1 gram (gr. xv.)

Mix and add to water, syrup, or any agreeable elixir. To be given in doses proportioned according to the age of the child.

When the solution is made with water, a milky precipitate is formed of the insoluble quinia tannate, which requires to be shaken up before being administered. The intensely bitter impression upon the fauces and glottis, without doubt, contributes to the beneficial influence of the remedy, although it leads to much difficulty in its administration to many children, and risks an increase of the paroxysms. When, however, it is not objected to, its effects have been, in many instances, to abort the disease in an average period of 3.8 days.

Magnesium Wire as a Ligature for Arteries.

EDWARD C. HUSE, M.D., of Rockford, Ill., proposes that magnesium wire should be used in place of catgut or silk for ligatures, claiming that the readiness with which magnesium burns when lighted shows that it is readily oxidized and converted into soluble magnesia, and that the same process, though slower in degree, will be likely to occur when the metal has become imbedded in the tissues, so that, after a time, the ligature will have become entirely absorbed. —*Chicago Med. Jour. and Exam.*

The Cadaver-Poison of the Australian Natives.

ACCORDING to Taplin, the inhabitants of the lower Murray district of Australia, who are comprised under the name of Narrinjeris, make use of a most destructive poison for killing their enemies, namely, the specific animal poison developed in human cadavers. The instrument used for inoculating an enemy with it is called *nieljeri*. The natives state that the knowledge of this poison has been communicated to them by the inhabitants along the upper Murray; and it has at present become a most destructive weapon in the hands of the natives, who adopted it with so much the more eagerness as their former belief in charms is gradually dying out among the present generation. The practice of the nieljeri is very much facilitated by the fact that the natives do not bury their dead, but preserve them above ground. Into such a corpse the point of a spear, consisting of a sharp-pointed piece of human bone, six to eight inches long, is inserted. Then a bunch of hairs or feathers is saturated with the fat of the decomposing body, and tied about the pointed bone. This apparatus is the *nieljeri*. With it the murderer stealthily approaches his victim, slightly

scratches the skin with the sharp poisoned point, and, if undetected—as it often happens in consequence of the narcotic sleep of the natives after one of their gigantic meals—he steals away unsuspected. Soon the terrible effects of the cadaveric poisoning make their appearance, and the person generally dies under the most excruciating pains.

On a new Rhubarb.

MR. COLIN, pharmacist at Verdun (France), who has devoted much attention to the study of rhubarb, some time ago received from Monseignor Chauveau, Apostolic Vicar of Thibet, what the latter considered to be the true mother-plant of Chinese rhubarb. This plant having flowered, although imperfectly, Mr. Colin sent a specimen of it to Prof. H. Baillon of Paris, who found it to approach very closely to *Rheum hybridum*, so much, in fact, that it may be considered to be a variety of it. A section of the root of this plant raised by Mr. Colin gives the appearance of very good rhubarb. Prof. Baillon names the variety, in honor of Mr. Colin, *Rheum hybridum*, var. *Colinianum*. We now know positively two species of rhubarb, which produce rhubarb in China, namely, *R. hybridum* var. *Colinianum*, and *R. officinale;* besides *R. palmatum* furnishes, according to Col. Przewalski, good rhubarb in Thibet.—*Journ. de Ph. et de Ch.*, June, 1878, 484.

Persian Hair-Dye.

THE Persians are known to be great adepts in the art of dyeing and coloring the hair. They use for this purpose certain vegetable powders, one of which has been known to be the "henna," while the nature of the other had heretofore remained doubtful.

Dr. Tholozan, physician to the Shah of Persia, has lately sent to Mr. Coulier a quantity of each of these powders, together with botanical specimens of the respective plants. Mr. Planchon, to whom these were submitted, declared one of these to be really the *henna* (*Lawsonia inermis*), and the other was recognized as a species of *Indigofera*, most likely *I. argentea*.

According to Dr. Tholozan, the *henna* is cultivated in South Persia, at Gezd and Kirman, as well as in Egypt and Syria. The coarse powder of the leaves is mixed to a paste with hot water, and this is applied, assisted by a hot air-bath, to the beard, hair, and nails. Previously, however, it is necessary to wash the hair thoroughly with soap and water, to deprive it of greasy matters. The first application is allowed to remain on for one and a half to two hours at least; then the dyed parts are washed with much water. The effect of the *henna* under these circumstances is to impart to the hair a very fine *orange-red* color, which turns out particularly handsome when applied to white hair. The tint, of course, varies according to the color of the hair to which it is applied. In order to convert this reddish tint into black, a second application is required. For this purpose, the powder of the second ingredient, called *reng* or *rang* (meaning properly "color," "dye"), is applied likewise in the form of a paste for about two hours. The resulting black color is most beautiful, on account of its depth and lustre. The darker the natural color of the hair, the blacker is the tint produced; while perfectly white hair does not assume such a jet-black tint. The skin which has been colored red and black by the two pastes is easily rendered white again by soap and friction, while the hair firmly retains the resorbed color for a long time.

The *henna* and *reng* employed in Persia are raised in the province of Kirman, district of Kabiz. The *reng* is also cultivated in Arabistan, but it is less esteemed than the former. Both plants require a hot and rather damp climate. The *reng* is gathered about the first of April, while the *henna* is collected at two periods, namely, on the 21st of July, and at the end of autumn. The culture of these two plants is the object of great care in Kirman, and a large portion of the revenue is derived from it.—*Journ. de Pharm. et de Chim.*

Grindelia Robusta.

SOME time ago Prof. J. M. Maisch reported the fact that the commercial *Grindelia robusta* appears to be derived from at least three species, most of it from *G. squarrosa*. This statement is confirmed by Mr. E. M. Holmes, Curator of the Pharm. Soc. of Great Britain, who writes as follows (in *Pharm. Journ. and Trans.*,* April 6th):

The genus *Grindelia*, according to Asa Gray, is one which is characteristic of the plains west of the Mississippi, extending to the Pacific coast and to Mexico, with two or three species in similar regions in South America. They are, however, most abundant in Mexico and Texas. The chief distinguishing character of the genus lies in the pappus, which consists of from two to eight rigid awns that a touch is almost sufficient to break off, and which in fact fall off early.

The species are very intricate, and run so much one into the other through a variety of forms, that it is difficult to say how many of them have a right to that distinction. Consequently, it is a difficult matter to define any good character by which the species may be distinguished. Those which have been chiefly relied on in describing these plants have been the shape and serration of the leaves, the character of the scales of the involucre, and the number of the awns of the pappus. The latter character is, however, of little practical value, since the number is variable in the same species, and the flowerheads are usually so resinous that it is dif-

* Read at an Evening Meeting of the Pharmaceutical Society of Great Britain, April 3d, 1878.

ficult to examine a dried specimen without the pappus falling off.

The species which seem to possess this resinous matter, upon which it may be presumed the active properties of the plant depend, and which are most likely to be met with in commerce, are *G. squarrosa*, Dunal., *G. rubricaulis*, DeC., *G. robusta*, Nutt., *G. integrifolia*, Dec., *G. inuloides*, Willd., and *G. glutinosa*, Dunal. For pharmaceutical purposes, these may be roughly distinguished as follows: *G. squarrosa* has leaves which are narrowly lanceolate, tapering downwards to a small cordate base, so that the upper portion of the leaf is the broadest, and the scales of the involucre are subulate and strongly curled backwards. In *G. robusta* the leaves are oblong, broadest at the base, nearly twice the width of *G. squarrosa*, and obtuse at the apex; the scales of the involucre are similar to those of *G. squarrosa*, but are less squarrose. *G. integrifolia* has the leaves entire or very sparingly serrated, with the leaves longer and more tapering at the apex than those of *G. robusta*, which it otherwise resembles. *G. inuloides* is a very well marked species, the flowerheads being almost immersed in large leafy bracts, so that they have a sessile appearance; the leaves are nearly as broad as those of *G. robusta*, oblong, and much wider near the base, and are furnished with short closely set teeth, which are more obtuse than in the other species. *G. glutinosa* has lanceolate leaves, broader than those of *G. squarrosa*, also tapering to the base, but the scales of the involucre are linear, with a short point, and are not bent backwards, but erect. *G. rubricaulis* is easily distinguished by the hairiness of the involucre and purplish stem, and by the uppermost leaves being larger at the base, while the lower leaves taper towards the stem. It is this last species which, under the name of *G. hirsutula*, is mentioned in Wood and Bache's "Dispensatory" as a remedy for the irritation caused by the poison of *Rhus Toxicodendron*.

The amount of resin developed in the plants appears to vary according to the situation in which the plant grows, those which are found in hot dry places being apparently most resinous.

Although it is probable that the resin does not differ in properties in the various species, it is at least satisfactory to know that, although the one to be met with in commerce in this country is not *G. robusta*, it is quite equal to that species in the amount of resin it contains, and indeed appears to be one of the richest in medicinal properties of the whole genus.

The Preparation of Green Soap.*

In a clean pot or dish, preferably of iron or copper, and capable of containing at least three times the quantity, put one part by weight of linseed oil; heat gently, and add, in two portions, three parts in all, by measure, of liquor potassæ, U. S. P. or B. P., providing either come up to the standard requiring 5.8 and 5.84 per cent of hydrate of potassa. Boil quietly and stir frequently until the mass becomes clear, which, with four ounces of oil and twelve ounces (fluid) of liquor, will require about one hour, and with ten pounds of oil about five hours. If, during the process, the mass becomes too thick to stir easily, add a little water. Allow the soap to become cool, but before it sets, work in the coloring matter, which must be previously prepared by boiling finely-powdered indigo with water until the color is formed into a thin paste. Twenty grains of indigo, boiled with one and a half ounces of water until the mixture is reduced to about one drachm, will answer for the soap from four ounces of oil. The soap must not be too hot, nor must it be reboiled after adding the coloring matter, or the green will be destroyed.

The method I have given is that pursued by continental makers of green soap, and works well.

A Berlin ware or Wedgewood dish may, of course, be used instead of iron or copper, but as the boiling point of the mixture is high, there is great liability of fracture, and cold water must be added very cautiously, and the stirring must be almost continuous.

The proportions of oil and alkali given above are such as will turn out a satisfactory article, with most samples of linseed oil, and with lye of the proper strength. I think these definite directions regarding quantities advisable for those who have not had much experience in saponification.

The best guide in soap-making, where the strength of the lye is not known, is that afforded by applying a very small portion of the soap to the tip of the tongue. The sharp taste of the alkali indicates more boiling or more oil, or perhaps more water. This test, though not very scientific, is eminently practical, and is very generally employed. The product will be about twice the weight of the oil employed, and should be of a dull bottle-green color, and in consistence at least not thicker than lard, or butter at moderate temperatures, just so that it will retain its form, and might be carried on paper.

Genuine green soap should be made from hempseed oil, and is largely used in France (*savon vert*), Germany (*grüne Seife*), and other continental countries, where it is used almost universally in the household. It is not, however, always made from this stock, but often of other vegetable and perhaps animal oils, and is then colored in the manner I have indicated.

Under the name *Sapo Viridis*, it is officinal in the German Pharmacopœia, but this authority does not afford any other information than that the soap is "a lubricous, soft, yellowish-green mass of a nauseous smell."

A tincture or solution in spirit is used in some parts of this country, but I am not aware of the exact strength.

* Extract from a paper by E. B. Shuttleworth in *Canad. Pharm. Journ.*, June, 1878.

The Deep-Rock Spring Water.

A CORRESPONDENT of the *Boston Medical and Surg. Jour.* writes, concerning the Oswego Deep-Rock Spring, that the water is obtained from an artesian well at or near Oswego, N. Y. In order to secure it, a bank of hard-pan, thirty feet in height, was first removed, and then a boring made in solid rock to a depth of over one hundred feet. The water was first put into the market in 1871. As a beverage, it has already met with considerable public favor, and is displacing the use of the Vichy, Kissingen, and Selters Waters. It is slightly effervescent, and in taste is equal to "Apollinaris," being preferred to it by many, and being lower in price. It has been found serviceable in kidney and bladder troubles, and its use lessens the frequency of urination which often accompanies irritability of the latter. It is also advised in atonic dyspepsia and in acne. It is a mild diuretic, aperient, and alterative, slightly tonic, and may be taken in doses of two to five glasses per diem.

On Pelletieria,* an Alkaloid of Pomegranate Bark.

MR. TANRET has discovered in the bark of the branches and roots of the pomegranate a volatile alkaloid, to which he has given the name *pelletieria*, in honor of the well-known chemist, Pelletier. The alkaloid may be obtained by the following process: Pomegranate bark, from the branches and roots, is reduced to a coarse powder, the latter moistened with a rather thick milk of lime, and packed in a displacement apparatus. It is then treated with water, and the percolate divided into two portions, each of which is several times shaken with chloroform. The latter, after being separated, is treated with dilute acid, and the slightly acidulous aqueous solution is evaporated, when the crystalline salt of the alkaloid will remain behind. This may be obtained pure, by decomposing the salt with potassium carbonate, and dissolving the alkaloid out with ether or chloroform. On evaporating the latter solution at a low temperature, or even on distilling off the ether or chloroform, the pure substance is left as a residue. One kilo of the dry bark yields about four grams of sulphate of pelletieria.

Pure pelletieria is oleaginous, colorless, and volatile (boiling about 180° C.). It emits vapors at ordinary temperature, and is very soluble in water, alcohol, ether, and chloroform. The sulphate, muriate, and nitrate are crystallizable, but exceedingly hygroscopic. It is precipitated by most of the alkaloidal reagents. Whether the tænicidal properties of the pomegranate-bark are due to this alkaloid remains to be shown by further researches, which are promised by the author.—*Répert. de Pharm*, 1878, 241.

* In place of this awkward name, Dr. Hager proposes the much more rational name *punicine* (punicia).

Old-Style versus New-Style Practice.

WHEN I commenced the practice of medicine, the traditional saddle-bags had not quite gone out of fashion, and the physician was expected to carry about on his person the principal resources of the materia medica. Then, as even now in very many country places, the physician was his own apothecary. Having his drugs about him in their crude shape, he could not be very nice about the mode of their administration. Children remembered and shunned him from instinctive dread at the remembrance of his nauseous doses. His "C. cum J." and "pil. rufii" made the strawberry jam of the good dame's pantry long obnoxious to her children, in accordance with the law of association of ideas.

Now things are fast changing for the better, at least in regions that are not outside the pale of modern civilization. No more nasty castor-oil, but delicate emulsions sweetened and flavored with peach blossom and vanilla, which our patrons' children take to with avidity; the oil of the cod in honeyed potion, emulsified and digested, and fit for instantaneous absorption; laxative elixirs that have driven jalap, rhubarb, etc., out of respectable usage. And then think of the parvules, the gelatine-coated pilules, the tiny, tidy capsules, and the fascinating elixirs! And last, but not least, the wonderful variety of malt extracts which our patients declare are so appetizing! To be sure, our apothecaries complain of the hardship of having to buy all these nice things, and exclaim that even the Pharmacopœia is going out of fashion. It may be so, for the pleasant elixirs of the manufacturing chemists are fast superseding the old-time tinctures.

There may be a gain in all this, and there may be an evil—an evil in so far as we substitute for reliable preparations of known strength those which, while advertised to contain such and such medicaments in such and such proportions, are mere sophistications, the exponents of cupidity, avarice, and dishonesty. I have had personal evidence that some of the elixirs of quinine, caffeine, pepsin, etc., are frauds, and that sugar-coated pills and compressed pills do not always contain all that they are advertised to contain. Granting, however, the reliability of these niceties in pharmaceutics, I think there is unquestionably a gain over the old modes of medication. I believe that it will hold true that a medicine is generally more efficacious that is administered in a pleasant and palatable form. I do not attempt to explain *why*; but I see no reason why remedies which are offensive to the gustatory nerves should not be offensive to the sensory nerves of the whole alimentary canal, and thus antagonize absorption. The membranous apparatus of the veins and absorbents are so far living things that they have their likes and dislikes. Certain it is that I have found in my own person that the bromide of potassium is better tolerated and more efficacious when dissolved in simple elixir

or "anise cordial" than when taken in watery solution, and I have patients whose experience is similar. Three cases have just come to my knowledge, of persons living in this city who have long been epileptic; these patients were for years treated by a combination of the bromides (two of them by myself) with no satisfactory results. The prescription of the potassium salt in an agreeable combination with cinchona by a Pennsylvania quack has given all three patients an exemption for four months from epileptiform attacks,—*petit mal*, *grand mal*, and everything. I have no interest in recording this fact, except that the truth should be told, even if it be against ourselves. In two of the cases my watery solution of the potassium bromide—one gramme dose—failed to have the slightest effect in arresting the paroxysms; there were constantly diurnal and nocturnal attacks of *petit mal*, with very frequent attacks of *grand mal*. The mixture from Pennsylvania has been thoroughly analyzed by Mr. Carl Castelhau (practical chemist) and by myself, and proved to contain no mineral ingredient but potassium bromide, and that in the proportion of one gramme to the dose; the excipient is compound infusion of cinchona with alcohol. I need not repeat that the effect was immediate, and so far has been permanent. The difference in results cannot be explained by any vague theories about the influence of mind over body, but by the theory—of which we are continually receiving striking confirmations—that medicines which are made palatable are thereby rendered more acceptable to the stomach, and more readily gain access, through absorption, to parts physiologically susceptible to their influence. If they offend the sensory nerves of the alimentary canal, the probability is that they will prove irritant to the nervous system generally, and be speedily expelled through the organs of excretion before they have exercised their special physiological influence.

In dismissing this topic, which might be expanded into a treatise, I would say that it is very important that in the exercise of our functions as family physicians, we should be on good terms with the little folks. This requires not only patience with their whims and foibles, but some degree of catering to the gustatory sense of our juvenile patrons. Many a family physician of the regular persuasion has been abandoned for a homœopath because the children would not take the nauseous medicines of the regular. Here the nice "parvules" which contain minute doses in sugary disguise come to our rescue. Here the simple elixirs often serve a good turn; we dilute them with water, add our aconite, veratrum, etc., and children seldom object to them. Calomel, chlorate of potash, ipecac, etc., can be rubbed up with sugar, and flavored so as to be quite agreeable so the infantile palate. Astringents, as tannin, catechu, are generally well tolerated in the traditional chalk mixture.

"What a blessing is citrate of magnesia," said a mother to me the other day, "and the milk of magnesia! These preparations are suited to so many complaints of children, and they never refuse to take them."

This is a common but not universal experience. I have on my visiting list little "sons of Belial" that have an inborn antipathy to everything that is called medicine. They are a trial to all kinds of practitioners.

I have endeavored in this article to indicate one of the tendencies of the times,—to eliminate from the materia medica hosts of unpalatable drugs, or find for them an excipient that shall divest them of their unpalatableness. We aim to treat diseases "*tuto, cito, et jucunde*," but we emphasize the *jucunde*.—E. P. HURD, M.D., *Boston Med. and Surg. Jour.*

The Medicinal Value of Polygonum Punctatum.

A COMMON domestic remedy, but little known or valued otherwise, contains, when dried, 18 per cent of tannin. Used in the form of saturated tincture by the writer, it has been valuable in dysentery, watery or mucous diarrhœa, as an antipyretic in typho-malarial and bilious remittent fevers, having for the latter purpose few equals. Dr. Woodward has, with it, reduced the temperature in a few hours from 102°, or even 104°, to 98°. Combined with any of the salts of cinchona, one-half the dose of the latter will have a better effect than a full dose uncombined.

In dysentery, accompanied with tormina or tenesmus, ℥ xx. to ʒ i. in mucilaginous drinks, may be given every hour or two, or, when the frequency of discharges prevents sleep, an enema of ʒ i. in an ounce of cold water, after such dejection, will calm the bowels in a short time.

The author finds some of the fluid extracts of the drug to be valueless, probably from want of care in gathering the true plant. A variety of the species, known as heart's-ease, has leaves larger than the true ones, and also marked with a dark blotch, which the true polygonum has not. The flower of the true variety is pink, while that of the false is white.

The plant should be gathered while in blossom and dried quickly in shade. It must be kept in tight paper bags to retain its virtue.—B. WOODWARD, M.D., in *The Am. Med. Bi-Weekly.*

Alcohol as a Natural Constituent of certain Essential Oils.

SOME years ago it was observed by Gutzeit* that ethyl-alcohol is a natural constituent or product of certain plants, particularly of the natural order Umbelliferæ. The presence, therefore, of traces of alcohol in an essential oil derived from this family is not always a proof that it has been added fraudulently. This was noticed again lately by Prof. Kraut, who found traces of alcohol in oil of cumin, which he assumed to be present naturally.

* Liebig's Annalen der Chemie, 177, 344.

RECENT PAPERS.

Journal of the Chemical Society. June.

The Poisonous Principle of Urechites Suberecta. (J. J. BOWREY.) A very common plant in Jamaica, where it is called "nightshade," is the *Echites Neriandra* Griseb., or *Urechites suberecta* Muell. Arg., according to Prof. Dan. Oliver. Wonderful tales are told of its poisonous powers in the hands of those acquainted with its properties, it being stated that they could so administer it as to cause either the very speedy death of the victim, or to kill only after the lapse of weeks or months.* It is believed to have been used with comparative frequency in the time of slavery, as a means of getting rid of obnoxious masters, and is even now supposed to be used for criminal purposes.

The leaves are intensely bitter and very acrid, producing a sensation on the lips and tongue of being swollen and blistered, though their aspect is quite unchanged. The powder of the leaves causes violent sneezing. All the green portions of the plant and the flowers possess these properties. The author has obtained from the leaves and green tips two substances of great physiological activity: 1. *Urechitoxin;* about 0.5 per cent exists in the fresh leaves. This is crystallizable, excessively bitter, neutral, soluble in 2 parts of 70 per cent (or 1.4 parts of 80 per cent; 14 parts of 50 per cent; 198 parts of 30 per cent; 965 parts of 10 per cent) alcohol, 565 parts of ether (0.720 sp. gr.), 1,500 parts of water, etc. Very poisonous. Less than 1 milligram, injected, killed a cat in 16 hours.—2. *Urechitin*, crystallizable, very bitter in solution, insoluble in cold water or cold alcohol below 40 per cent; even boiling water only dissolves traces. It dissolves in 35 parts of nearly absolute alcohol, in 88 parts of 80 per cent, 610 parts of 60 per cent, etc., alcohol. It is equally poisonous.—3. *Urechitoxetin*, crystallizable, but tasteless and physiologically inactive. Prepared by treating urechitoxin with alcoholic hydrochloric acid. These bodies are probably glucosides.

Action of Hypochlorites on Urea. (H. J. H. Fenton.) In the decomposition of urea by hypochlorites, only one-half of the nitrogen is liberated when caustic alkali is present, while in presence of an alkaline carbonate nearly the whole N is evolved.

The author has found that the loss of half of the nitrogen is due to the formation of a cyanate, so that the reaction is:

$$2CH_4N_2O + 3NaClO + 2NaHO = 2NaCNO + 3NaCl + 5H_2O + N_2.$$

The best method of proceeding would be to divide the urea-solution into two halves, to treat one with hypochlorite, which evolves one-half of the N; and the other half with hypobromite solution, in which case there is a loss of only about one per cent.

Revista Farmaceutica. June.

Enumeration of European Plants growing wild in the Prov. of Buenos Ayres and in Patagonia. We content ourselves with drawing the attention of those who may be interested in the subject, to the above catalogue, begun in the May number, and to be continued in the following numbers.

L'Union Pharmaceutique. June.

Researches on the Tree which produces "Goa" Powder. (DR. DA SILVA LIMA.) The author has received the following information from Dr. Ramiro A. Monteiro:

"The tree, which yields the Araroba or Goa powder, is known in the districts where this industry flourishes, under the name *Angelim amargosa* ('bitter angelim'). The word *angelim* is not now understood. The tree belongs to the nat. ord. Leguminosæ; and the appellation 'bitter' arises from the fact that the ligneous portion resembles good cinchona in flavor and bitterness. It is found in company with another tree belonging probably to the same genus, namely, *Andira anthelmintica* Benth., which has anthelmintic properties. There is also an *angelim doce* ('sweet angelim,' *Andira vermifuga*) and an *Angelim pedra* (*Andira spectabilis*)."

The araroba tree occurs abundantly in the forests of Camamu, Igrapiuna, Santarem, Taperoa, and Valença of the province of Bahia. It attains a very large size, one to two metres in diameter, and twenty to thirty metres in height.

The Goa powder is contained in more or less narrow fissures and chinks in the ligneous portion, running mostly through the whole length of the trunk, and becoming narrower above. It is customary to cut down the tree, to saw it into sections, and then to split the blocks open in the direction of the fissures, when the powder is readily obtained. There is scarcely any doubt that the original tree is either an *Andira* or a *Cæsalpinia*.

Journal de Pharmacie d'Anvers. June.

On Essential Oil of Valerian. (G. BRUYLANTS.) The author finds: 1, the oil pre-exists in the plant; 2, it is composed of a hydrocarbon, $C_{10}H_{16}$; 3, of an alcohol, $C_{10}H_{16}.H_2O$, and of 4, ethers: formiate, acetate, and valerate of borneol ($C_{10}H_{17}$); 5, valerianic acid pre-exists in the root, together with formic and acetic acids.

Repertoire de Pharmacie. June.

Composition of the Pancreatic Juice. (TH. DEFRESNE.) The author has separated three different ferments from the pancreatic juice, each of which has different functions and properties:

Amylopsine, which converts starch into sugar;
Steapsine, which splits up fats;
Myopsine, which dissolves albumen.

Remedial Properties of Typha latifolia. (MR. BIEN.) Drawing renewed attention to the decided healing properties of an application of the down of cat-tail to wounds, particularly to burns or scalds. It is only necessary to puncture the vesicles, to cover them with a dense layer of the down, and to leave this until it drops off.

Cantharidal Collodion. (A. LALLIER.) The author uses the following process:

Cantharides, sound and freshly powdered,	100 gm.
Ether, stronger	150 "
Glacial acetic acid	20 "

Mix the ether and acid, moisten the powdered cantharides, previously packed in a percolator, with the mixture. After 12 hours, pour on the rest of the liquid, collect the percolate slowly, and allow it to evaporate in a capsule at ordinary temperature, until it has lost $\frac{1}{10}$ of its weight. Then dissolve in it 2.25 gm. of gun-cotton for every 100 gm. of tincture, and add to it (in same proportion) 1 drop of castor oil and 5 gm. of Venice turpentine.

The Pharmacist (Chicago). July.

Tinct. of Sanguinaria, a Specific for Rhus-Poisoning. (DR. D. J. PARSONS.) Dr. Parsons sends a communication to the above paper, in which he states that he has used for many years the tincture of bloodroot as a remedy in poisoning by rhus toxicodendron. He has never known it to fail. It should be thoroughly applied to the affected parts four times in quick succession; that is, as soon as one coat is dry, another should be applied. It must be spread on pretty thick, by means of a brush or feather. In rare cases a repetition of the application may be required after twelve hours.

Pharmaceutische Centralhalle. Nos. 24–27.

Glucose-Reagents. DR. HAGER communicates the following formulæ as substitutes for Fehling's or for Knapp's solution, for the estimation of glucose.

1. *Pellet's* solution: 68.7 gm. crystallized copper sulphate, 100 gm. anhydrous sodium carbonate, 200 gm. sodium chloride, and 6.87 gm. ammonium chloride, dissolved in hot water; allowed to cool, and made up to 1 litre with water.—10 cc. of the solution correspond to 0.05 gm. of glucose. Used like Fehling's solution.

2. *Sachsse's Solution:* 18 gm. dry mercuric (red) iodide and 25 gm. of potassium iodide are dissolved in water, a

* Could this be perhaps the same plant in regard to which the U. S. State Department, by request of an American physiologist, has lately instructed our Minister to Hayti, Mr. Langston, to make nquiries? The name of the Haytian plant is, we believe, *manga*.

solution of 80 gm. of caustic potassa is added, and the whole is diluted with water to measure 1 litre—40 cc. correspond to 0.1342 gm. of glucose. Used in the same manner.

Benzoic Acid. Benzoic acid does not exist free in gum benzoin, but it is associated with another acid, which partly accompanies it during sublimation. A pure and uniform product can only be obtained by the so-called wet process (by lime) and subsequent sublimation. This is not new, but new is the further statement of the author (Rump), quoted by Dr. Hager, that all benzoic acid of the continental factories is probably a *mixture* of the artificial and natural acids.

American Journal of Pharmacy. July.

Dangerous Hydrargyrum c. Creta. (E. G. HENDRICKS.) Citing the instance of a sample of this preparation, found in a drug-store, amounting to about 3 oz., the bottom layer of which ($\frac{1}{6}$ of the whole quantity) had entirely changed to red oxide.

Medicated Syrups. (IS. DAVIS.) The author proposes to prepare a number of syrups (of squills, wild-cherry, senega, rhubarb, sarsaparilla, etc.) by percolating the powdered drug with syrup in conjunction with a portion of alcohol or other solvent. The process is scarcely adaptable to a large number of syrups; but in a few instances it appears to have advantages over other methods.

Schweiz. Wochenschrift f. Pharmacie. Nos. 23–28.

Solubility of Silver Nitrate in Alcohol. (J. M. EDER.) At 15° C., 100 parts by weight of alcohol dissolve

Silver nitr. pts.:	3.8	10.3	22.1	30.5	35.8	56.4	73.7	107	158
Alcohol % vol.	95	80	70	60	50	40	30	20	10
Alcohol sp. gr.	.815	.863	.889	.912	.933	.951	.964	.975	.986

The Analyst. July.

Assay of Carbolic Acid Powders. (A. H. ALLEN.) The author finds that the only reliable method of estimating the quantity of carbolic acid in disinfecting powders is to subject the powder to distillation. 1,000 grams of it are to be placed into a tubulated retort, and the latter is to be gradually heated until no more liquid distils over. A brisk heat is required towards the last part of the operation. It is best to agitate the retort once or twice towards the end of the process, as the powder is a very bad conductor. Every part of it should, in turn, be exposed to an incipient red heat.

Pharm. Journ. and Trans. Nos. 418–420.

A New Chemical Test for Carbolic Acid. (E. W. DAVY.) The reagent is prepared by dissolving one part of molybdic acid in ten parts of pure and concentrated sulphuric acid. The amount of molybdic acid may, however, be much smaller, even as low as only 1 per cent, without diminishing the delicacy of the test. The test is to be applied in the following manner. Into a small white porcelain capsule (which had better be provided with a handle, to facilitate the reaction by the application of a gentle heat), place one or two drops of the liquid to be examined; then add three or four drops of the molybdic reagent. If any carbolic acid was present, even as little as the 1-70,000th part of a grain, there will be produced a light yellow or yellowish-brown tint, which, passing through a maroon or reddish-brown, soon develops a beautiful purple coloration, which persists for days. Addition of water destroys the color; hence it is necessary to work with very small quantities, as above directed. By carefully working, the author was still able to detect even so minute an amount as the 1-350,000th part of a grain of carbolic acid.

Pharmaceutische Zeitung.

The Revision of the German Pharmacopœia. This subject at present occupies largely the attention of the pharmacists of Germany. The various local and provincial associations contribute suggestions and improvements, some of which are identical with those intended to be introduced in our own pharmacopœia, while others are well worthy of consideration as to the propriety, on our part, of adopting them likewise. Again there are some which it would be injudicious or unnecessary to adopt here. As we shall soon have occasion to say more about pharmacopœial revision, we shall not, at present, take up any more space with this subject.

The Chemist and Druggist. July.

"*Opium Rectificatum;*" "*Swan and Proctor's Patent.*" Among the exhibit of Swan and Proctor at the International Exposition of Paris, there is to be found a blackish tin-foil-coated globe, labelled as above stated, which, according to the *Chemist and Druggist*, "is one of the greatest modern triumphs in pharmacy, if it fulfils its promise." By a special process, the inventors claim to have produced an article guaranteed to contain invariably 9 per cent of pure morphia in the mass, and 10 per cent in the powder. *Provisional* protection for six months was granted to it by the Patent Office on December 14th, 1877, and the *patent* itself was *granted* in June last. The following is the text of the specification:

"Whereas commercial opium is well known to contain narcotine and other objectionable matters, and to vary to a dangerous extent in regard to the proportion of active matters it contains, it is expedient that opium for medicinal use should be subjected to a process which should remove its narcotine and render it uniform and reliable as regards its medicinal strength.

"Our invention has for its object the improvement of opium for medicinal use by removing from it narcotine and other objectionable matters; its nature consists in the treating of the opium with such solvents as have the power of dissolving from it narcotine and other objectionable matters without removing any considerable quantity of the meconate of morphia, except in such cases where the morphia is in excess of the desired proportion, and in these cases, with the removal of only such portion of meconate of morphia as may be required to reduce the strength to a desirable standard, the solvents used, and the mode of using them, being such as to leave the opium in a condition fit for all medicinal purposes.

"The manner in which our invention is performed necessarily varies with the nature of the opium to be operated upon; the following is an example of the treatment of average Turkey opium.

"A convenient quantity of dry opium in fine powder is put into a percolator of a somewhat conical form, provided with a perforated false bottom covered with flannel, and the true bottom fitted with a pipe and tap to regulate the flow of liquid. The tap being closed, a portion of the solvent, hereinafter described, is poured upon the opium and well mixed with it by stirring; a convenient proportion being one to one and a half gallons for every ten pounds of opium. The mixture is allowed to macerate two or three days, after which the solvent may be drained out, and a further portion poured upon the surface of the opium to displace that which was absorbed. At intervals of a day or two the displacement may be repeated till the percolate comes through almost free from narcotine or other matter desirable to be extracted: the solvent mechanically retained by the opium after draining may be recovered by distillation. The opium then only requires powdering and assaying to fit it for all the purposes to which powdered opium is applied, or working with a certain proportion of water till reduced to a mass to fit it for all the purposes for which lump opium is used.

"The solvent we prefer for operating in this way is a mixture of eight parts by measure of chloroform with one part by measure of ether, but we do not restrict ourselves to this solvent or to the mode of extraction above described.

"In certain circumstances, one or more of the following solvents may be used, either mixed or separately—namely, ether, chloroform, benzine, light mineral oils, sulphide of carbon, ethylic, methylic or amylic alcohol, oil of turpentine, and, when desirable, their action may be accompanied by that of ammonia or other chemicals.

"Turkey opium, containing but little free acid when treated as above described, will have its narcotine reduced to a small fraction of a unit per cent. Persian opium, frequently containing much free acid, is more difficult to render satisfactorily pure, but the narcotine may be lib-

erated and extracted by the above treatment with the addition of the passage of dry ammonia through the mixture of opium and solvent till an alkaline reaction is permanently established, when the process may be completed as before described. If water be excluded during the presence of the ammonia, the meconate of morphia remains undecomposed in the opium at the end of the process. If the sample of opium under operation contains more than a desirable proportion of morphia, the proportion may be reduced to a desirable standard by adding ethylic or methylic alcohol to the solvent, the meconate of morphia being nearly insoluble in a mixture of chloroform and ether, slightly more soluble in the same with the addition of spirit, and freely soluble in a mixture of chloroform and spirit without the addition of ether.

"Having now described the nature of our said invention, and the manner in which the same is to be performed, we declare that we claim the purification of opium for medicinal use from narcotine and other objectionable matter by any process the nature of which is substantially the same as that which is herein described."—

We are utterly at a loss to comprehend how Messrs. Swan and Proctor could claim any originality for the method of depriving opium of "narcotine and other matter desirable to be extracted;" for this process, as well as the various solvents mentioned in the patent, are well known all over the world, and such opium has long been in the market. We further cannot see that the "*inventors*" have discovered any new method for assaying their product. And finally we must express our astonishment that the experts at the British Patent Office should have been ignorant of these facts and have put themselves on record as supposing this process new. The only wonder is, that the patent does not also extend to the use of the displacement apparatus, which might possibly have yielded a larger income than is likely to be realized from this double-distilled and highly-rectified opium.

La Gaceta Cientifica de Venezuela. No. 23.

The National Pharmacopœia of Venezuela. One of the objects and duties of the "Faculdad Médica de Carácas" is the regulation of the practice of pharmacy. It had long been contemplated to undertake the construction of a National Pharmacopœia, but all attempts in this direction have hitherto failed. A new effort is about to be made to accomplish this desirable result.

Boston Medical and Surgical Journal. July.

Relief to Distressing Symptoms of Cancer of Pylorus by Codeia. (AUSTIN FLINT, M.D., p. 2.) The use of codeia in one-grain doses so completely stopped the vomiting and pain of the disease that the patient really thought the tumor was decreasing in size.

Unusual Action of Mercury and Chloral. (L. H. WATSON, M.D., p. 99.) Narrates an example of the effect of mercury in producing an itching and burning sensation over the whole body, with redness, followed by desquamation. In the same patient, chloral-hydrate causes a deep-red spot upon the left wrist, within twenty minutes after it has been taken, and is also followed by cracking and peeling off of the skin.

The Canada Lancet. July.

Poisoning by Carbolic Acid. (J. H. RYAN, M.D.) A fatal case occurred in a drunken man who took one and a half ounces of carbolic acid in twelve ounces of water, followed by a quantity of liquor. Insensibility and coma rapidly followed, and death took place in forty-five minutes.

Salicylic Acid in Rheumatic Fever. (W. F. SAVAGE, M.D.) Alkalies and colchicum having first been tried, salicylic acid with veratrum was then given, with the usual result of rapidly diminishing fever and articular pain.

The Practitioner. June.

On the Employment of the Oxalate of Cerium in Pregnant Sickness. (F. A. IMAGE.) Says that the officinal dose of one to two grains is utterly useless, but that doses of ten grains will, in most cases, completely check the nausea of pregnancy. He also uses it to relieve nausea caused by uterine irritation from other causes, in combination with potassium bromide.

On Tincture of Eucalyptus in Ague. (H. P. ROBERTS, M.D.) Upwards of twenty cases of ague were treated by the writer, who is a regimental surgeon in India. Only nine gave sufficiently satisfactory results to serve as evidence for or against the usefulness of the remedy. The cases were of indiscriminate selection, and continued in spite of the use of the tincture. They had finally to be treated with quinia, in order to interrupt the succession of paroxysms.

American Journal of the Medical Sciences. July.

Cold Water Enemata as a Therapeutic Agent in Chronic Diarrhœa. (M. J. B. MESSEMER, M.D.) A quart of iced water, injected in quantities of half a pint at a time, after every movement of the bowels, quickly arrested the course of several diarrhœas that had become chronic. Previous to undertaking this plan of treatment, he had experimented on himself and others in health with enemas of warm and cold water, and had established the fact that the former would increase the movements and render them more watery, while the cold water enemas would result in constipation that required cathartics for its relief. Moreover, when injected slowly, water is not expelled but remains, and by distending the rectum, keeps its inflamed walls apart.

On the Importance of Combining Morphia with Quinia in the Treatment of Malarial Fever. (M. LEWIS, M.D.) Believes that ten-grain doses of quinia, combined with a third or half-grain doses of morphia, will break up an attack of intermittent fever with far greater certainty than would a twenty-grain dose of quinia alone. Another advantage of the combination is the escape from the tinnitus aurium, which pretty certainly accompanies the action of larger doses of quinia given alone.

The records kept by Dr. Lewis show that out of 461 cases of malarial fever 317 received quinia and morphia combined, either in powder or in aromatic sulphuric acid, while 144 were treated in other respects in the same way, with the exception that opium was omitted. The average number of chills occurring subsequent to date of attendance, in the cases treated with the combination, was $1\frac{12}{317}$, while the average number in the cases treated without morphia was $3\frac{13}{144}$.

British Medical Journal. Nos. 913–917.

Milk as a Vehicle for Quinia. (R. L. BATTERBURY, M.B., p. 933.) If one grain of quinia sulph. be dissolved in an ounce of milk, its bitterness will be hardly perceptible. Even with two grains the bitterness is not marked. Five grains may be taken in two ounces of milk without an unpleasantly bitter taste, while in a tumblerful the bitterness of this quantity is almost lost.

Since the doctor chooses to recommend this as a mode of administering quinia to children, we think it proper to say that *bad-tasting drugs like quinia should be given in articles of food, even in the case of adults, only in exceptional instances.* There are other and quite as effectual ways of administering them, and it is therefore hardly advisable to risk the disgust which children often, and adults sometimes acquire for wholesome articles of food, in consequence of their having some time been used as vehicles for medicine.

Glycerin in Internal Hemorrhoids. (W. H. JALLAND, p. 933.) In three or four cases where the internal use of glycerin was resorted to, it was followed by marked relief. In one case of advanced phthisis was this especially notable; doses of a drachm and a half every three hours relieved the pain and enabled the patient to sleep.

Tincture of Yellow Jasmin in Neuralgia of the Face and in Whooping Cough. (D. S. BRADLEY, M.D., p. 6.) Has used gelsemium in twelve cases of facial neuralgia, giving it, in adults, in doses of 15 minims of the tincture, in dill-water, every three hours. Generally one dose, and never more than three doses, were sufficient. It also served to diminish the cough in pertussis.

Warburg's Tincture in Puerperal Fever. (A. R. COLDSTREAM, M.B., p. 101.) In a case of puerperal fever where quinia had failed, excepting in large doses, to reduce the temperature, ½-oz. doses of Warburg's Tincture on succeeding days brought the temperature to 98.4° and the pulse to 80, and the patient made a good recovery.

Medical Times. 277–278.

Belladonna as a Stimulant to the Circulatory System. (R. H. WEBER, M.D. p. 463.) States the fact, now commonly accepted, that in collapse from opium it is not the directly antidotal properties of belladonna which constitute its value, but because it acts as a stimulant of the heart and of respiratory centres, and keeps these functions active while the opium is being eliminated by the kidneys.

He proposes, therefore, that it should be employed in collapse from other causes, such as cholera, pneumonia and failure of the heart's action in organic disease.

Enemata. (H. Y. EVANS, M.D., p. 487.) This is a summary of the history of the use of enemata as fashionable, hygienic, therapeutic, and alimentive measures; in which the writings of others are largely quoted, and the author's favorable views regarding the value of enemas for the latter purpose enunciated.

Note on the Use of Oleate of Mercury in Eye Diseases. (M. LANDESBERG, M.D., p. 491.) The writer finds a combination of oleate of mercury with cosmoline capable of serving all the purposes in ophthalmic practice formerly filled by ointment of the yellow oxide of mercury, without being amenable to the two considerable disadvantages of the latter preparation, viz.: its tendency to undergo rapid decomposition and loss of medicinal value, and the incapability of readily reducing the oxide to a powder by trituration.

Opium Production in Africa.—A new competitor for the enormous profits of the opium trade with China has arisen, and appears to have excited alarm in India. A company was established during the past year at Lisbon, called the "Mozambique Opium Cultivating and Trading Company." From this it would appear that Portugal wishes to become the protector of free trade in opium, with the intention of competing with the opium-producing districts of India. The promoter of the Lisbon Company is Senhor Ignacio José de Paivo Raposo, who receives 50,000 acres of open, unappropriated, and cultivated land, belonging to the State, in Mozambique, and has preference in the choice of such lands as are suitable for the cultivation of the poppy plant, and also "the exclusive right, for twelve years, to export opium, free of duty, through all the custom-houses of the province." The company has been formed with a capital of £178,000, in shares of £22. 5*s.* each. A number of the opium cultivators who were taken from India to Mozambique by the promoters of the last company, returned from there lately. They describe the land taken by the company at Mozambique as well adapted to opium cultivation, and say that very large out-turns may be expected, and *Zambesi* opium may eventually become a formidable competitor of the Indian in the China market. The *Leeds Mercury*, from which the above is quoted, adds: "If there is nothing wrong in the opium trade, then surely the Portuguese are as free as ourselves to embark in it. If there is something wrong in it, we, who have carried it on for a century through scenes of illegality and bloodshed, are not in a position to taunt Portugal with the immorality. We opened China to opium, procuring its legal admission by a treaty the benefits of which we cannot confine to ourselves."—*Pharm. J. and Trans.*

Phosphates for Agricultural Purposes.—The mining and manufacture of the phosphate rock in South Carolina has become one of the leading and most important interests of the State. From a small beginning the manufacture and shipment has risen in nine years to the amount of 109,086 tons in 1877–8, of which 115,965 were sent to foreign ports,

BIBLIOGRAPHY.

A KEY TO ORGANIC MATERIA MEDICA, written for the Students of the South-London School of Pharmacy by JOHN MUTER, M.A., F.C.S., Director of the School, etc., etc. Second edition, Revised and Re-arranged. London: Published at the School Office, Kensington Cross, S. E., 1878. Sm. 8vo, pp. 469, with 79 pp. of Appendix and Index.

ALTHOUGH specially adapted for the British student, there is no good reason why this may not be a very useful hand-book for scholars on this side of the water as well. From most of the text-books within reach of American students it differs in being arranged according to the natural orders, and not according to the therapeutical effects of the remedies. So, too, being intended for students in pharmacy, and not the medical student or physician, therapeutical features have received but a lesser amount of attention, while chemistry and pharmacy have relatively greater space devoted to them than is the case in any similar work published here with which we are acquainted, unless it be the U. S. Dispensatory of Wood and Bache. As a sample of the general arrangement of the contents, we will specify the following:

Sub-class IV.—MONOCHLAMYDEÆ [*Apetalæ*].

Plants either monochlamydeous or achlamydeous. *Natural order.*—Polygonaceæ [here follows definition, and then as an example] RHEI RADIX—rhubarb root. Botanical source, Collection, Description, Uses, Chemistry, Formulas in detail for seven preparations having rhubarb as the principal ingredient, Substitutions and Adulterations.

In the appendix are given directions for sampling, mounting, and observing specimens, which, with the accompanying tables, will be valuable aids to the student, since these tables give the name of each drug, the part used, whence obtained, natural order, habitat, and the preparations when they are officinal.

The type is good, the pages leaded, the matter well arranged, and the general appearance commendable. We have no doubt that the work has only to become known to be in considerable demand in this country.

FOWNES' MANUAL OF CHEMISTRY, THEORETICAL AND PRACTICAL. Revised and corrected by HENRY WATTS, B.A., F.R.S. A new American from the twelfth English edition, edited by ROBERT BRIDGES, M.D. 177 Illustrations. Philadelphia, 1878, Henry C. Lea. 8vo, pp. 1,027.

No text-book of chemistry has probably fulfilled its mission so admirably, in any country, as the excellent hand-book of Fownes. A large number of the younger generation of English-speaking chemists have mastered the elements of the science by its aid, and are accustomed to turn to its pages for reference. The last American edition had been based upon the tenth English edition, and was issued in 1869, since which time the text, on this side of the Atlantic, was left unaltered up to the present. This is considered, not only by ourselves, but, to our certain knowledge, by a large number of prominent chemists and teachers, as a very serious mistake on the part of the publishers. During the past two or three years, it had become a question of expediency, whether the American edition of Fownes' chemistry could be allowed to be used by the students, especially those in organic chemistry, as a great deal of the matter had become antiquated, and a vast amount of new material was missing. Other text-books had to be here and there resorted to, or the more expensive English edition had to be made use of. We are truly glad that the publishers have recognized the necessity of a new edition, which at once restores the work to its former usefulness. It will be unnecessary to specify the many additions and changes made in the text of the work, for any one acquainted with the progress of chemistry during the last nine years will be able to realize it. The English edition, being in two volumes, has been condensed into

one, by the selection of a small but very clear type. The work is very carefully edited and printed, and has still a very handy size. We are sure that "*Fownes*" will remain the standard text-book as long as the publishers will keep it abreast of the progress of the science of chemistry.

HORSE-BACK RIDING FROM A MEDICAL POINT OF VIEW. By GHISLANI DURANT, M.D., Ph.D. New York: Cassell, Petter & Galpin. 1878. 8vo, pp. 137. $1.25.

THE perusal of this book leads to the belief that the writer rides a hobby as well as a horse, and that his desire to write something was considerably in excess of the amount of the something which he had to write about.

That this form of exercise is one of the best is not likely to be disputed by any considerable number of persons who know anything about it. It is, without doubt, the expense of providing and keeping a saddle-horse which limits its use to so few persons. All that can be said in favor of it, however, might have been embraced in very much less space than Dr. Durant has seen fit to distribute it over, at the risk of swamping it among far-fetched theories and questionable physiology. Nor needed he to rival "Mr. Knickerbocker" by beginning as nearly as possible with the creation of all things, in order to render his subject comprehensible.

HOW TO BE PLUMP; OR, TALKS ON PHYSIOLOGICAL FEEDING. By T. C. DUNCAN, M.D., etc. Chicago: Duncan Brothers, 1878. 12mo, pp. 60.

THE number of persons who will be interested in the subject treated of by the writer is by no means inconsiderable. We could wish, however, that they had been furnished with physiology of better quality and theories less peculiar to the author. There is nothing decidedly objectionable on the one hand, nor, on the other, do we see anything in the work which appears to entitle it to commendatory notice; and, while no one is likely to suffer any particular harm from following the directions it contains, neither, in our opinion, will they risk an over-plumpness by pursuing the same course.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F.R.S., etc., with 522 engravings on wood. The drawings by H. V. Carter, M.D., and Dr. Westmacott. The dissections jointly by the author and Dr. Carter, with introduction on GENERAL ANATOMY and DEVELOPMENT by T. HOLMES, M.A. CANTAB., etc. A New American from the Eighth and Enlarged English Edition. To which is added LANDMARKS, MEDICAL and SURGICAL by LUTHER HOLDEN, F.R.C.S. Philadelphia: Henry C. Lea. 1878. Roy. 8vo, pp. 983.

LIKE previous American editions, this one has also been supervised by Dr. Richard J. Dunglison, of Philadelphia, who has made such slight alterations or additions as the text seemed to require. The recent work of Mr. Holden, which was noticed by us on page 53 of this volume, has been added as an appendix, so that, altogether, this is the most practical and complete anatomical treatise available to American students and physicians. The former finds in it the necessary guide in making dissections; a very comprehensive chapter on minute anatomy, and about all that can be taught him on general and special anatomy; while the latter, in its treatment of each region from a surgical point of view, and in the valuable section by Mr. Holden, will find all that will be essential to him in his practice.

THE DANCE OF DEATH. By WILLIAM HERMAN. Third Edition, Sixteenth Thousand. New York: The American News Company. San Francisco: Henry Keller & Co., 1877. 12mo, pp. 131.

THIS is written to prove that waltzing, as it is almost universally practised in fashionable society, "consists substantially of a system of means, contrived with more than human ingenuity, to excite the instincts of sex into action, however subtile and disguised at the moment, in its sequel the most bestial and degrading."

Although we are by no means ready to admit that the evil is so general as the writer appears to think, the tendency of the waltz to produce this result is not doubtful, and we shall rejoice if the book shall contribute to driving this form of dancing out of decent society.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D. New York: William Wood & Co. 1878.

NUMBERS 5, 6, and 7 of this serial have come to hand, with illustrations of the following-named conditions:

Endothelial Cells in Hydrothorax, x 755; Chronic Pleurisy with Adhesions, x 750; Vertical Section of the Pleura: Tubercular Pleurisy, x 90; Parietal Peritoneum of a dog, x 750; Normal Human Omentum; Cellular Peritonitis, human, x 750; Cellular Peritonitis in a dog, fourth day, x 750; Omentum of Rabbit, inflamed for one hour, connective tissue cells and pus-cells, x 750; Peritonitis in a dog for 48 hours, x 750, and Human Omentum, acute peritonitis, x 750.

THE AMERICAN MAIL AND EXPORT JOURNAL. A monthly paper devoted to the American Export Trade. HOWARD LOCKWOOD, Publisher, 74 Duane St., New York.

A MINIATURE copy, by the photo-plate process, of this journal has come to hand, and gives us occasion to compliment the enterprise and good business tact which has placed at the service of American manufacturers and dealers this elegant and useful advocate in foreign countries. We have had the pleasure of counting it among our exchanges from the outset of its career, and are indebted to it for many valuable items of news interesting to our readers, whether they be retailers or manufacturers of drugs and chemicals.

THE PITH OF THE DRIED CORN-STALK AS A UTERINE TENT; and General Remarks upon the Use of Uterine Tents in Gynecological Practice, with cases. By W. T. GOLDSMITH, M.D., Atlanta, Ga. 8vo, pp. 25. Privately published.

BY pressure with the fingers, the pith of corn-stalk can be reduced to one-fourth or one-fifth its original size, and upon absorption of fluid it will again enlarge to its previous dimensions. It may also serve as a vehicle for medicines.

THERAPEUTICS AND MATERIA MEDICA FOR THE USE OF FAMILIES AND PHYSICIANS. By LEWIS SHERMAN, A.M., M.D. Milwaukee, Wis., 1878. 8vo, pp. 203. $1.00.

THE author announces that his object has been to "instruct intelligent non-professional persons in the nature, symptoms, course, prevention, and treatment of the most common forms of disease."

In the introduction, he devotes a fair amount of space to the nature of the principal articles used as food, and to the conditions necessary to preserve health. The employment of medicines in the cure of disease is considered from a homœopathic standpoint, and is clearly though briefly explained. The diseases are arranged in alphabetical order, and, in the main, are quite as well described as the extent of the work would permit. Part II. is devoted to a description of the remedies referred to.

Although there is a well-known difference of opinion regarding the value of remedies used homœopathically, there can be but one concerning the book as an instructor in the nature of diseases, and that will be decidedly in its favor. From the standpoint of those who are adherents to the homœopathic principle of cure, we are not so well able to judge of its merits, but the impression it leaves is likewise favorable.

THE ORGANIC CONSTITUENTS OF PLANTS AND VEGETABLE SUBSTANCES AND THEIR CHEMICAL ANALYSIS. By DR. G. C. WITTSTEIN. Authorized translation of the German original, enlarged with numerous additions by Baron Ferd. v. Müller [the well-known Government Botanist of Australia]. Melbourne, 1878. 8vo, pp. xvi., 329.

THE translation of Wittstein's work into the English language fills a long-felt gap in analytical literature. It should be in the hands of all pharmaceutical students.

UROLOGICAL DICTIONARY: Containing an Explanation of Numerous Technical Terms, the Qualitative and Quantitative Methods Employed in Urinary Investigations, the Chemical Characters and Microscopical Appearances of the Normal and Abnormal Elements of Urine, and their Clinical Indications. By JOHN KING, M.D. With Twenty-seven Useful Tables and Thirty-nine Woodcuts. Cincinnati: Wilstach, Baldwin & Co., 1878. 8vo, pp. 266.

THE author is already well known as having contributed a number of valuable works to the medical literature of this country. The general nature of this one is sufficiently well shown by its sub-title, and it only remains for us to say that the work has been fairly done, and that we are very glad to possess a book for reference which contains information, not easily accessible elsewhere, upon so many subjects connected with the urine. For a physician in general practice, the work will surely be a great help, both in diagnosis and in his understanding of the current literature of the subject.

MONTHLY REVIEW OF CURRENT LITERATURE. Philadelphia, May, 1876. Huntington & Co., 251 South Fourth St. Folio, pp. 12. Monthly. $1.25 per annum.

A VALUABLE addition to the class of journals which are becoming essential to professional men, and to those who take an interest in the literature of the day, but whose time is too limited to allow them to go, seriatim, through the new publications to find what they want.

CIRCULAR IN REFERENCE TO AMERICAN ARCHÆOLOGY. Issued by the Smithsonian Institution, Washington, D. C.

THE object of this pamphlet is to aid those who may choose to report the state and circumstances connected with archæological discoveries in this country, to do so in a manner productive of best results, compared with the labors that have been done or are now being carried on with a view to their future publication by the Institution.

EIGHT CASES OF INTRA-LARYNGEAL GROWTHS Removed through the Natural Passages. By. J. H. HARTMAN, M.D., Baltimore, Md. 8vo, pp. 11. Privately published.

THE PRESENT STATUS OF THE PATHOLOGY OF CONSUMPTION AND TUBERCULOSIS. By J. HILGARD TINDALE, M.D., of New York City. 8vo, pp. 93. Privately published.

A VERY clear summary of our present knowledge of this decidedly intricate subject.

FORCIBLE AND RAPID DILATATION OF THE CERVIX UTERI for the Relief of Stricture, Chronic Endo-cervicitis, Conical Cervix, Flexions, Sterility, etc. By JOHN BALL, M.D., of Brooklyn, New York. 8vo, pp. 9. From the Trans. of the N. Y. S. Med. Soc.

UEBER DIE ASCHEN-KRANKHEITEN (*Apiosporium Citri* Briosi e Pass.) und DIE BLATTFLECKEN KRANKHEITEN (*Sphærella Gibelliana* Pass.) DER CITRONENBAEUME von FELIX VON THUEMEN. Folio, pp. 4.

STUDIEN UEBER DAS REIFEN DER TRAUBEN, von B. HAAS, kk. Adjunct, etc. Folio, pp. 29.

THE two pamphlets above named are published under the auspices of PROFESSOR DR. L. ROESLER, director of the Royal Imperial Institute for grape and fruit culture at Closterneuburg, near Vienna. The first gives (in Italian) the observations of the author on the nature of two parasites which infest the leaves of the lemon tree; the second (in German) is an investigation of the changes which occur in different varieties of grapes during the process of ripening and in the *must*, or unfermented wine, made from them.

GLI ALCALOIDI ED IL LORI BROMURI E CHLORUI. By S. PUTERI. Milan. 16mo, pp. 12. Privately published.

NEW REMEDIES AND THE PREPARATIONS, being the Introductory Address delivered by MR. COUNCILLOR WILEY (President), to the members of the Coventry and Warwickshire Pharmaceutical Association, January 9th, 1878. Sm. 8vo, pp. 16.

UNIVERSITY OF MICHIGAN—DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS. Announcement for 1878–79. Important changes in the plan of work. Published by the University, 1878. 8vo, pp. 31.

THE SOFT PALATE. Its Value in Diagnosis as Compared with the Tongue in Derangement of the Liver, Malarial Diseases, and Exanthematous Fevers. By WM. ABRAM LOVE, M.D. 8vo, pp. 9. Privately published.

CERTAIN SYMPTOMS OF NERVOUS EXHAUSTION. By GEORGE M. BEARD, M.D. 8vo, pp. 24. Privately published.

New Medical Journals.—*The Cincinnati Lancet and Observer* and *the Clinic*—the former a monthly, the latter a weekly, have united under the title of *the Cincinnati Lancet and Clinic*, and will, in future, be published as a weekly. The early numbers of the new series are very creditable to Drs. Culbertson and Hyndman, who edited the separate journals, and who combine their labors in the new one.

The Buffalo Medical Journal, which became, not long since, very nearly a rival of Rip Van Winkle, has quite recovered consciousness and, with its August number, enters upon its eighteenth volume with a new dress, type, paper, cover, etc., and what is quite as much of importance to its subscribers, some comparatively fresh matter.

The first number of *The Arkansas Medical Record*, dated January, 1878, has also just come to hand. It is published at Little Rock, by JAMES I. HALE, M.D., editor, and AMBROSE LYNN, business manager. The stereotyped "want" has obliged the production of this sixteen-page monthly; the reasons for it being so numerous and self-apparent that the editor modestly does "not attempt to enumerate them, or discuss their several merits." All of which does not prevent the editor being obliged to write the only "Original Communication," based upon cases reported from memory, and of a nature somewhat questionable.

The Medical and Surgical Brief: a Practical Monthly Clinic, E. JAY FISKE, M.D., editor, 82 Astor House, N. Y., sends out a prospectus which the editor calls a "Supplementary Issue." It is promised that the journal shall be published monthly and contain 24 double-column pages. We hope that the first funds available, after the printer's bill has been paid, will be used for the purchase of a dictionary.

Obstetric Gazette. A Monthly Journal devoted to Obstetrics and Diseases of Women and Children. EDWARD B. STEVENS, A.M., M.D., editor. Terms $3.00 yearly, in advance. Large 8vo, pp. 48. Editor's office at Lebanon, Ohio.

THIS new special journal commences with the July number, and contains the usual list of original communications, correspondence, reports of societies, abstracts, etc. Dr. J. O. Marsh contributes an article on the Artificial Feeding of Infants, and Dr. P. S. Murphy one on Hydatidiform Mole. Dr. Fordyce Grinnell, of the Wichita Agency, sends a paper on some features of Indian obstetrics, etc.

Dr. Stevens has already had considerable experience as a medical editor, and will, without doubt, furnish the subscribers to his journal with an excellent choice of matter.

The Illinois Medical Recorder. Published monthly. Edited by R. E. BEACH, M.D., Vandalia, Ill. 8vo, pp. 28. $1.50 per annum.

THE announcement accompanying the first number states that this monthly will be published under the auspices of the District Medical Society of Central Illinois, and will be devoted to the interests of the profession of the Middle and Southern portions of the State.

ANALYSES OF PHARMACEUTICAL CHEMICALS AND PREPARATIONS.

No more samples will be issued for competitive analysis, but in the future this department will be devoted to practical methods of pharmaceutical analysis, and conducted, as heretofore, by Mr. HENRY B. PARSONS.

Persons to whom a prize has been awarded are requested to send to the publishers the title of any book or books they may desire, not exceeding in the aggregate the value of $10.00.

The prize this month will be divided between D. C. COOKE, *of Boston, and* T. M. NEWBOLD, *of Philadelphia.*

THE August sample was purchased of a retail pharmacist for "commercial zinc oxide," and illustrates very well the standard of education and morals which is accepted among druggists in certain sections. The same druggist previously sold the same substance to the writer for "commercial zinc carbonate," and when informed of its real composition said: "You asked for *commercial* zinc carbonate." Further comments are unnecessary. The value of chemical knowledge and conscience are great, even to the retail pharmacist.

Let us now make a systematic analysis of the substance, and record the results in as concise a form as possible.

I. *Preliminary Examination.*

1. A dry, white powder, moderately heavy. Its dryness excludes all deliquescent salts, and its whiteness all common salts of copper, iron, chromium, cobalt, nickel, and manganese.

2. Sparingly soluble in water. This solution being neutral to litmus, excludes salts of most of the "heavy metals," and points to salts of the alkalies or the alkaline earths. Moderately soluble in hot dilute nitric or hydrochloric acid without effervescence; absence of a carbonate. Almost insoluble in strong dilute sulphuric acid; no effervescence indicates absence of an oxalate or a carbonate. Nearly insoluble, also, in acetic acid.

3. Heated in a glass tube, closed at one end, gives off considerable water of hydration, which condenses on the cool part of the tube. No charring shows absence of organic matter; no sublimate, the absence of salts of mercury, of ammonium, or of arsenious oxide. No change of color shows absence of salts of zinc, bismuth, and lead. No odor shows absence of ammonium salts, arsenic, etc.

4. Heated before the blowpipe on platinum foil. Is not volatilized; absence of arsenic, salts of mercury, and of ammonium. Is incandescent; presence of aluminum, barium, strontium, calcium, or magnesium. The flame is colored reddish-yellow; probable presence of calcium, and absence of strontium, barium, potassium, sodium, and lithium (use blue glass). Does not change color; absence of salts of zinc, bismuth, lead, etc. Does not give off any odorous vapors; absence of salts of organic acids, or other salts easily decomposed by heat. The mass, after heating, is alkaline, when moistened with water; probable presence of barium, strontium, or calcium salts. This moistened mass does not blacken a silver coin; absence of a sulphide in the original substance.

5. Heated before the blowpipe on charcoal gives many reactions as in 4. After heating, the moistened mass blackens a silver coin; presence of a sulphite or a sulphate in the powder, reduced to a sulphide by the burning carbon, thus:

$$BaSO_4 + 2C \text{ (heated)} = BaS + 2CO_2.$$

No reduction of a metal when heated with bicarbonate of sodium; absence of lead, silver, copper, bismuth, cadmium. No reduction to a magnetic, dark-colored mass; absence of iron or nickel. No particular change of color; absence of other metals. The ignited mass moistened with solution of cobalt nitrate and again ignited, is of a dull gray color; probable presence of barium, strontium, or calcium, and absence of much silica or magnesium.

6. Heated in a borax bead. The bead is colorless and transparent when hot or cold; absence of many metals and of much silica, and probable presence of barium, strontium, calcium, or magnesium.

7. Conclusions from Preliminary Examination.

The substance seems to be a salt of calcium, either a sulphite or a sulphate, which contains combined water. The absence of heavy metals, of organic matter, of much silica, and of metallic salts easily volatile seems proven; also from flame reactions, the presence of more than traces of alkaline salts is proven. From the sparing solubility of the salt in water and acids, it is evident that the salt is not a sulphite. This view of the case is strengthened by the fact that sulphuric acid failed to disengage any irritating vapors of sulphurous anhydride (SO_2). We then conclude that the salt is, very probably, calcium sulphate in its natural form, gypsum ($CaSO_4.2H_2O$). Its solubilities in water and acids are the same as those for gypsum.

II. Let us now make an analysis in the wet way. A nitric acid solution gives tests for sulphuric acid, calcium, and *traces* of silica and ferric iron. The same solution treated with potassic carbonate, to remove all calcium, and the filtrate, *exactly neutralized* with nitric acid, gives no precipitate with silver nitrate; absence of hydracids and of phosphoric, arsenious, arsenic, boracic, and the cyanogen acids. This nitric acid solution gives with barium and calcium chlorides a good test for sulphuric acid, none for phosphoric or oxalic acids. As no other basis can be found, we conclude, with "Davy," that the sample is "pure" (nearly) "hydrated sulphate of calcium."

A very good way to get insoluble salts into good shape for analysis is to fuse them in a crucible with dried sodium carbonate.

$$CaSO_4 + Na_2CO_3 = CaCO_3 + Na_2SO_4.$$

Treating the fused mass with water, we get a solution containing *the acid of the insoluble salt*, with excess of sodium carbonate. The residue, insoluble in water, is dissolved in an acid, and tested for *the base of the insoluble salt.* This method is much used in analyses of silicates, chlorides, and sulphates.

The amount of water still in the sample after first drying on the water-bath, is stated by "Cosmos" to be 20.4 per cent. "Davy," who did not dry it first on the water-bath, found 25 per cent. The theoretical amount is 20.93 per cent, hence the result of "Cosmos" is very nearly correct. To prove that the sample was gypsum, not plaster of Paris, I quote from answer of "Davy": The substance was ignited. "The residue, after cooling, was moistened with a few drops of water to the consistence of putty, and soon solidified, becoming quite hard when dry, as ordinary plaster Paris; the sample, when so moistened, did not become hard."

The prize this month will be divided equally between "COSMOS" (D. C. COOKE, Boston, Mass.) and "DAVY" (T. M. NEWBOLD, Philadelphia).

"*Maranta.*"—Your analysis is good, but you should have determined whether the sample was gypsum or plaster of Paris. There *was* a trace of silica. Try and condense your reports a little. The crystals were calcium sulphate.

Crockery Protectors.—A new article is manufactured in England, consisting of elastic rings to be put upon the bases of jugs, basins, etc., for the purpose of preventing breakage and unpleasant jarring sounds, and to avoid injury to counters, tables, marble slabs, etc. Some of our own manufacturers may find it not an unprofitable speculation to put something similar into the market.

Beet-sugar in Maine.—The manufacture of sugar from beets is to be undertaken in Maine on a large scale.

The Tobacco Crop of the United States for the year 1877 aggregates over 400,000,000 pounds, valued, in its manufactured state, $33,000,000.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

No. 409.—**Oregon Grape—Berberis aquifolium** (J. H. F., Laramie City, Wyoming).

The correspondent sends us a sample, by mail, of what mountain-men call Oregon Grape, and which they use as an antiperiodic, asking for its botanical character, etc. The specimen has been submitted to Dr. Geo. Thurber, who says:

"The 'Mountain grape' is *Berberis aquifolium*, a very common under shrub in the Far West—or rather Northwest. It is not rare as a shrub in cultivation—the 'Holly-leaved Barberry,' and quite as frequent as *Mahonia*. There are two sets of Barberries, one of which, like the common *Berberis vulgaris*, has deciduous leaves, also simple, while the other has evergreen leaves, which are compound.

"Many years ago Nuttall separated these barberries with persistent and compound leaves from the old genus *Berberis*, and made of them a new genus, *Mahonia*. Our best botanical authorities do not accept this, but place them all under *Berberis*, with *Mahonia* as a sub-genus. I think that the majority of nurserymen, who seem to strive to get as far as possible from botanical accuracy, offer it as *Mahonia*.

"Of course it is useful for malarial fever. I have had considerable experience in the West, extending to the Pacific, and I think that every herb or shrub that is especially bitter has a similar reputation. In the malarial parts of Michigan, almost every family or neighborhood has its favorite "cure," and I have found that the basis is always some intensely bitter herb or bark, qualified by some aromatic.

"The connection between intensely bitter principles, (including quinia, etc.), and the anti-periodic powers of remedies, is one which may have been studied, but if not, it is a useful field for some one to investigate."

No. 410.—**Phosphorus Paste for Vermin** (F. H. S., Indianapolis).

Introduce 1 drachm phosphorus into a flask, and pour over it 1 ounce rectified spirit. Immerse the flask in hot water until the phosphorus is melted; then put a well-fitting cork into the mouth of the flask, and shake briskly until cold. The phosphorus is now reduced to a finely divided state. This, after pouring off the spirit, is to be mixed in a mortar with 1½ ounces of lard. Five ounces flour, and 1¼ ounces brown sugar, previously mixed together, are now added, and the whole made into a paste with a little water. Cheese may be substituted for sugar when the paste is intended for rats or mice. There is said to be no danger whatever of spontaneous ignition, either during or after the preparation of this paste. It will, however, be safe to exercise all needful care, to prevent the phosphorus from igniting before it is mixed with the lard.

No. 411.—**Essence of Ambergris; or, Tincture of Ambergris** (A. D. W., Fulton, N. Y.).

Take 10 drachms of ambergris and 1 pint of alcohol, 84 per cent; put them into a strong bottle or tin can, secure the mouth perfectly and very firmly, keep the vessel in a room exposed to the heat of the sun, or equally warm, for a month or two, observing to agitate it briskly several times daily during the whole time. Lastly, decant the clear portion, and, if necessary, filter it through paper. Common practice in making the essence is to cut the ambergris up small before digesting it; but a better plan is to rub down the ambergris with a sufficient quantity of powdered glass, clean silicious sand, or dry lump sugar, observing afterwards to rinse the mortar out well two or three times with portions of the spirit, so that nothing may be lost. A second quality may be made by employing half the quantity of ambergris to the same amount of spirit.

No. 412.—**Artificial Gin** (B. H., Abington, Va.).

Gin may be imitated as follows:

Alcohol, 95 per cent	2 gall.
Glycerin	7 fl. ℥.
Oil of juniper berries	40 drops.
Water	1 gall.

Mix.

No. 413.—**Condition Powders for Cattle** (W. H., Norwalk, Ct.).

The following formula is much in use:

Powd. black sulph. antimony	4 parts.
" ginger	8 "
" potassium nitrate	8 "
Sulphur	8 "
Powd. resin	4 "
Sodium bicarbonate	8 "
Sodium sulphate	12 "

Mix. Dose ½ oz. to a pound of feed.

No. 414.—**To clarify Honey** (W. A. A., Trenton, N. J.).

Among the numerous methods proposed for this purpose, you might use the following:

Any quantity of honey is dissolved in an equal part by weight of water. The liquid is allowed to boil up 4 or 6 times without skimming; it is then removed from the fire, and after being cooled, transferred to several strong linen strainers, stretched horizontally, and covered with a layer of clean and well washed sand, about one inch in depth. When the solution has passed through the strainers, it is found to be of the color of clear white wine; the sand is rinsed with cold water, and the whole of the liquid is finally evaporated to the thickness of syrup.

No. 415.—**To render yellow Teeth white** (B. McA., Pittsburg, Pa.).

If the enamel is partly or wholly worn off the teeth, nothing that we know of can render them white or prevent their further decay. As long as the enamel is uninjured, and the yellowness is superficial, it may perhaps be removed by some bleaching dentrifice. *Deschamp's Dentrifice* might answer the purpose. To prepare this, take of dry chloride of lime 1 drachm, red coral, 2 drachms; triturate well and mix thoroughly. This powder is employed in the following manner; a new brush is slightly moistened, then dipped in the powder, and applied to the teeth. According to Deschamp, a few days' use of this powder will produce a marked alteration in the appearance of the teeth, which will acquire a white color. The preparation should, however, be used with caution, and the mouth well rinsed afterwards.

No. 416.—**Distinction of Quinia from Cinchonidia** (Jacksonville, Fla.).

Presuming that you should have a sulphate of quinia, which you suspect to contain sulphate of cinchonidia, you may proceed as follows: Dissolve a portion of the sample (about 2 grams) in water with the aid of a dilute acid. You should, however, take care not to use the latter in excess; hence it will be best, in all cases, to add to the clear solution a very dilute solution of soda, until, after briskly shaking, a faint opalescence is left, showing that there is a trace of free alkaloid in suspension. By now adding a drop of very dilute acid, the transparency of the solution may be re-established. Now add to it a cold saturated solution of Rochelle salt, which will throw down, slowly at first, but more or less rapidly after a while, crystalline tartrate of cinchonidia, if the latter alkaloid is present. Let stand for about twelve hours in a cold place, then filter, wash the precipitate with a little cold water and add this to the filtrate. Then keep on washing the pre-

cipitate with more cold water, until the washings cease to be fluorescent. It may then be further distinguished as cinchonidia by its not giving the thalleïoquin reaction (see NEW REM. 1877, 349; distinction from quinia); by its turning the ray of polarized light to the left (distinction from cinchonia), etc. The filtrate separated should give, on the addition of a slight excess of caustic soda, a precipitate which is entirely soluble, while moist, in a small quantity of ether. Of course, if you do not wish to entirely separate the bases, you will not need to be so circumstantial: in that case you may make a neutral solution as above mentioned, add solution of Rochelle salt, and let stand for a short time. If after the lapse of an hour no crystalline precipitate has appeared (generally adhering to the sides of the vessel) and you have no reason to suspect any other cinchona alkaloid, you may presume that cinchonidia is absent.

Another more usual method is the following: Dissolve the sample in water, with the aid of dilute acid, precipitate with caustic soda in slight excess, transfer to a filter, and wash with the smallest quantity of water possible. Then press it between blotting paper and dry it in a warm place (not over 100° F.). Reduce the mass to powder, and digest it in a flask with ten times its weight of ether, which must be kept up to the original bulk, by adding from time to time a fresh supply. Then allow to cool, and separate the ethereal solution from the undissolved residue. This is best done by pushing down into the tube of a small funnel a very small loose pellet of cotton, through which pure ether has been allowed to run, until it has become impervious to solid particles. The ethereal solution in the flask is now poured into the funnel, together with as much of the precipitate as will accompany it, and the flask rinsed out with a *very* small quantity of fresh ether, which is not poured into the funnel until all the solution has filtered through. The funnel, of course, must be kept covered by an almost snugly fitting glass-plate. The ethereal solution contains all the quinia, together with some quinidia and little cinchonidia if these were present; the residue consists of most of the cinchonidia (some quinidia, and practically all of cinchonia, if these were present). By making a neutral solution of the residue and applying the Rochelle salt test, as above, the alkaloid may be identified as cinchonidia.

No. 417.—**Fine red Sealing-wax** (D. S., Newburgh, N. Y.).

Melt cautiously 4 ounces very pale shellac in a bright copper pan over a clear charcoal fire, at the lowest degree of heat that will be necessary to melt it; when melted, stir in 1¼ ounces Venice turpentine (previously warmed) followed by 3 ounces vermilion. The heat must be neither too much nor too little, but just sufficient to allow a most thorough mixing of the different ingredients. When this is accomplished, the fluid mass is discharged into moulds and allowed to cool. For the purpose of melting the shellac more easily, some add to the same a little alcohol.

Or: 3 pounds shellac, 1¼ pounds Venice turpentine, and 2 pounds finest cinnabar, mixed in the same manner as the preceding.

No. 418.—**Blue-Black Writing Fluid.**

The following is said to yield an ink equal to the best in the market:

Powdered nutgalls, 6 pounds; powdered sulphate of iron, 2½ pounds; water, 6 gallons; gum Senegal, 2½ pounds. Place the powdered nutgalls into a copper vessel and add four gallons of the water. Boil for three hours, adding fresh water to replace that lost by evaporation. Pour the solution into a tub; allow it to settle, then run off the clear liquid, and drain the dregs. Dissolve the gum Senegal in a small quantity of hot water, filter, and add to the clear solution. Dissolve the sulphate of iron in the remaining water, mix with the above mixture, and add two ounces of powdered cloves. Allow the mixture to remain undisturbed for about seven days, or until it has acquired a moderately deep tint. Then draw off the clear liquid and bottle it.

No. 419.—**London Paste** (Dr. B., N. Y.).

The formula used at the London Throat Hospital for preparing this caustic is as follows:

Take of caustic soda and unslaked lime equal parts.

Reduce to a fine powder in a warm mortar, and mix intimately. Keep in well-closed bottles, and when required for use take as much as is sufficient.

Recommended for destroying enlarged tonsils or the elongated uvula, where treatment with the "guillotine" or scissors is objected to.

This preparation resembles the Vienna Paste, but is preferable in consequence of its being less liable to spread beyond the limits of application. Soda being used instead of potash, and water in place of alcohol, the preparation is much less painful.

No. 420.—**Atomized Inhalations** (J. W. S., Elmira, N. Y.).

Atomized medicated fluids may be advantageously used in affections of the lining membrane of the nose, mouth, and fauces, in croup and diphtheria, syphilitic affections of palate and throat, laryngitis, œdema of the glottis, whooping cough, bronchitis, phthisis, hoarseness and loss of voice. During the application, the patient should make deep and long inspirations and expirations. Except in acute cases, one application daily will suffice. (*See Tanner's Index of Diseases, p.* 341.)

The following are the principal *remedies used as atomized inhalations:*

Aqua	acidi carbolici	30 grs.	to 10 oz. water.
"	" lactici	f. 3 iiiss.	" "
"	" sulphurosi	30 min.	" "
"	" tannici	50 to 200 grs.	" "
"	calcis.		
"	aluminii chloridi	f. 3 i. solution	" "
"	aluminis	80 grs.	" "
"	ferri et alum. sulph.	30 "	" "
"	" perchloridi	30 "	" "
"	" sulphatis	20 to 40 grs.	" "
"	potassii permanganatis	50 grs.	" "
"	sodii chloridi	50 "	" "
"	zinci chloridi	20 to 50 "	" "
"	" sulphatis	50 "	" "

The inhalation of atomized fluids is acknowledged to be a rational and successful method of treating various affections of the nose, throat, air-passages and lungs. By its means the indicated remedy is applied directly to the diseased tissues, and is, in these cases, what washes and lotions are to the exposed surfaces when diseased or mechanically injured.

Inhalations may in this manner supplement constitutional treatment by the ordinary means, and it will be found a valuable auxiliary.

No. 421.—**Elixirs and Effervescing Salts** (H. & J. Lyons, Mich.).

There is no special work published containing formulæ for both of the above-mentioned preparations. You will, however, find the desired formulæ scattered through various books, as *Nelson's Handbook of Private Formulæ*, NEW REMEDIES, *Proceed. of Am. Pharm. Assoc.*, etc. See our next number for some of them.

No. 422.—**Volatility of Caffein** (C. H. H., Boston, Mass.).

Caffein becomes anhydrous at 120° C., sublimes at 177° C. (=350.6° F.), and fuses at 224–228° C. (=435–442° F.). We do not know what particular process is used by the American manufacturers in its preparation. You might make a direct inquiry; if the manufacturers do not consider it detrimental to their private interests, they will probably inform you.

No. 423.—**Extract of Musk** (Ohio).

Take of *pure* Tonquin grain musk 2 drachms. Mix ½ oz. of solution of potassa with 4 fl. oz. of alcohol, 56 per cent, and triturate the musk with this mixture until it is thoroughly softened and reduced to a pulpy state; add enough 56 per cent alcohol to make about one pint; stir well, allow the coarser particles to subside, and pour off

the supernatant fluid. Rub the coarser particles again with a fresh portion of alcohol, as before, and repeat the process until the musk is entirely reduced and the quantity of extract measures three pints. Allow this to stand for two weeks, with occasional shaking, when it will be ready for use.

No. 424.—**Syrupus Hypophosphitum Comp.** (H. A. C., Boston, Mass.). The formula adopted by the American Pharmaceutical Association is as follows:

Calcium hypophosphite	256 grs.
Sodium "	192 "
Potassium "	128 "
Iron, sulphate (proto-)	185 "
Hypophosphorous acid, sp. gr. 1036	9 fl. ʒ
Sugar	12 ℥
Water	q. s.

Dissolve 96 grains of the calcium salt in 4 fl. oz. of water, with the aid of heat, and acidulate the solution with a small proportion of the acid. Dissolve the sulphate of iron in 2 fl. oz. of water; mix the two solutions; allow the mixture to stand a short time, and pour it on a paper filter. Wash the precipitate on the filter with a small quantity of water acidulated as before, and preserve the filtrate. Dissolve the remainder of the hypophosphite of calcium with the other hypophosphites in 4 fl. oz. of water, with the aid of heat, adding the remainder of the hypophosphorous acid. Mix the solution and the reserved filtrate, adding enough water to complete 10 fl. oz, and pour the liquid into a bottle containing the sugar; agitate the mixture occasionally, until the solution is complete, and filter through paper, if necessary.

No. 425.—**Cologne from Pomades** (W. H. B., Tarrytown, N. Y.).

Pomades for making liquid perfumes are prepared by saturating purified and odorless fat with the flavor of fresh flowers, etc. This has been sufficiently explained in our volume for 1877, page 340, to which we have to refer you. Only those flavors are worked into "pomades" which are too fugitive, or where the separation of the essential oil would be too costly and circumstantial, or, finally, where experience has shown that any other process would change the delicacy of the original flavor. No *cologne*, that we know of, is made exclusively of such pomades. Nor are the pomades themselves used as such. They must first be converted into so-called "extracts." For this purpose, the best quality, known as "triple pomade," must be used, which, cut up small, is digested with pure alcohol at a gentle heat, until melted, and then briskly shaken till cold. One pound of pomade should make about a pint of extract. These "pomades" may be purchased from wholesale drug houses or perfumers, at about the following prices, when taking original packages: pomade cassie, jasmine, orange flowers, rose, tuberose, 11-lb. cans, $2.40 per lb.; pomade violet, 6-lb. cans, $4.50 per can.

No. 426.—**Algamating Battery Zincs** (L. R., Ripley, Ohio).

Into a saucer, or other dish of convenient size, put four ounces of clean water, to which add a drachm of oil of vitriol, and about twice as much mercury. Clean the dirt and crust from the surface of the zincs, and then immerse the end of one at a time into the vessel of mercury and acidulated water. With an old tooth-brush, or something similar, wash and scrub the surfaces, and brush the mercury up on to the plates, so as to distribute it well over so much of the surfaces as are commonly covered by the battery fluid. It is often well to put a little mercury into each battery cell. Messrs. Fleming and Talbot, of Philadelphia, give the following directions for making an amalgamating fluid, which is used by them and by some of the dealers in medical and surgical instruments:

Mix one pound of nitric acid with two pounds of muriatic acid, to which add eight ounces of mercury. When the mercury is dissolved, add three pounds more of muriatic acid.

The solution must be kept in a covered vessel, and may be used many times, the method of doing so being as follows: The zincs may be immersed one at a time for a few seconds in the amalgamating fluid, and then into a basin of clean water. Their surfaces are then to be rubbed with a brush or clean cloth, and they will be found to be covered with a fine coating of mercury.

This fluid does not affect the carbon plates of a battery.

If neither of the above-mentioned methods succeed in correcting the difficulty you mention, let us hear from you again.

No. 427.—**Warburg's Tincture.** (J. A. Z., Closter, N. J.)

We have had a number of queries of late, asking for the composition of this tincture, a formula for which was published in January, 1876, and which we will again insert, with full commentary, and the hope that urgent demand for its ingredients will cause a lively business in the drug market.

℞ Aloes Socotrinæ	1 lb.
Radicis rhei Indici,	
Semin. angelicæ,	
Confect. damocratis[1])	āā 4 oz.
Radic. inulæ,	
Croci sativi,	
Semin. fœniculi,	
Cretæ præparatæ[2])	āā 2 oz.
Radic. gentianæ,	
Radic. zedoariæ,	
Pip ris cubebæ,	
Myrrhæ electæ,	
Camphoræ,	
Boleti laricis	āā 1 oz.

The above ingredients to be digested with five hundred ounces of proof spirit, in a water-bath, for twelve hours; then expressed and ten ounces of disulphate of quinia added; the mixture to be replaced in the water-bath till all quinia is dissolved. The liquor, when cool, is to be filtered, and is then fit for use.

1. *Confectio Damocratis.* Damocrates, as he is called by Galen, or Servilius Democrates, as Pliny calls him, composed a formulary for the preparation of electuaries, plasters, and all other usual remedies, in a *poetical* form, for the purpose of preventing mistakes by copyists in the quantities of ingredients. The metre, namely, was a tolerably certain means of preserving the expressions of quantity, in spite of any abbreviations in manuscript. He flourished about 65 A.D. Fragments of his works, among them his Receipt for "Mithridate" or Confection of Opium, have come down to us. (Editions by Ch. F. Harless, 4to, Bonn, 1833; also by C. G. Kühn.) We give the composition of the confection according to the original Greek text, but use in place of the Greek the corresponding common and botanical names, where they are fully established; otherwise we shall indicate the contrary. The London Pharm. of 1746 still had the formula, but with slight alterations, necessitated by the inability of procuring certain ingredients, or for other reasons.

CONFECTIO DAMOCRATIS.

Cinnamon (*Cinnam. Zeylanicum* Nees)	16 ʒ.
Myrrh (*Balsamodendron Myrrha* Nees)	11 ʒ.
Agaric (of the Larch; *Boletus Laricis* L.); Indian Spikenard (*Andropogon Nardus* L.); Ginger (*Zingiber officinale* Roscoe); Saffron (*Crocus sativus* L.); Seeds of Treacle Mustard* (*Thlaspi arvense* L.), [or in its stead, Mithridate Mustard (*Lepidium campestre* Brown) Lond. Ph.]; Frankincense (fr. *Pistacia Terebinthus* L.)	āā 10 ʒ
Lemon grass (*Andropogon Schoenanthus* L.); Costus (*Costus Arabicus* L.) [or in its stead: Zedoary (*Curcuma Zedoaria* Roxb.) Lond. Ph.]; Indian Leaf (fr. *Cinnamomum nitidum* Nees; = Folia Malabathri) [or in its stead: Mace (fr.	

* The original here has the word *iberis*, which is usually applied to a species of Lepidium. But it is doubtful what is meant by it.

Myristica fragrans Houtt.) Lond. Ph.]; French Lavender (*Lavandula Stoechas* L.); Long Pepper (*Piper officinarum* C. DeC.); Hartwort Seeds (*Laserpitium Siler* L.); Juice of Hypocistus (*Cytinus Hypocistus* L., a parasitical plant growing upon species of *Cistus*); Liquid Storax (fr. *Liquidambar orientalis* Miller); Opopanax (prob. fr. *Opopanax Chironium* Koch); Galbanum (fr. species of *Ferula*); Balm of Gilead (fr. *Balsamodendron Gileadense* Kunth) [or in its stead: Expressed Oil of Nutmegs, Lond. Pharm.]; Russian Castor (Castoreum Ponticum fr. *Castor Fiber* L.).....āā 3 3

Poley-mountain (*Teucrium Polium* Lamb.); Water Germander (*Teucrium Scordium* L.); Fruit of Balm of Gilead Tree (see above) [or in its stead: Cubebs fr. *Piper Cubeba* Linn. f.)]; White Pepper (fr. *Piper nigrum* L.); Seeds of Cretan Carrot (*Athamanta Cretensis* L.); Bdellium (prob. fr. species of *Balsamodendron*). [The original has here also: Troches of Kyphi*]; and a species of Cassia, perhaps *Cassia Fistula* L.).....āā 7 3

Celtic Nard (*Valeriana Celtica* L.); Gentian (*Gentiana lutea* L.); Leaves of Cretan Dittany (*Amaracus Dictamnus* Benth.); Rose Leaves (*Rosa centifolia* et al. L.); Parsley Seeds (*Petroselinum sativum* Hoffm.); Amomum [uncertain what was meant by this; later supposed to have been cardamoms; so also Lond. Ph.]; Fennel Seed (*Fœniculum vulgare* Gärt.); Gummi (Gum Arabic, fr. *Acacia Verek* Guill. et Perr., etc.); Opium fr. *Papaver somniferum* L.).....āā 3 3

Calamus (root of *Acorus Calamus* L.); Valerian (root of *Valeriana Phu* L.); Anise Seed (*Pimpinella Anisum* L.); Sagapenum (fr. species of *Ferula*); [The original here has also; ἀρίον, which interpreters think meant *Aram*. But Andromachos in a similar work uses the term μάρον, which is supposed to be *Origanum Sipyleum*].....āā 3 3

Spignel (*Meum Athamanticum* Jacq.); St. John's Wort (fruits and tops of *Hypericum perforatum* L.); Acacia (Juice of the wood, or leaves, or fruit, according to Dioscorides and others, fr. species of *Acacia* in Egypt) [or in its stead: Catechu, Lond. Ph.]; Bellies of Skinks (the male skink: *Scincus officinalis* Laur.)...āā 2½ 3

Honey (clarified) three times of all the rest.

[The original adds: Wine, sufficient.]

2. Chalk was added to correct the otherwise extremely acrid taste of the tincture.

The rules for the use of the remedy as given by Dr. McLean, of Netly, England, in the *Lancet* of Nov. 13th, 1875, are as follows: "One half-ounce is given alone without dilution, after the bowels have been evacuated by any convenient purgative, all drinks being withheld; in three hours, another half-ounce is administered in the same way. Soon afterwards, particularly in hot climates, profuse, but seldom exhausting perspiration is produced. This has a strong aromatic odor, which I have often detected about the patient and his room on the following day. With this there is a rapid decline of temperature, immediate abatement of frontal headache—in a word, complete defervescence, and it seldom happens that a second bottle is required. If so, the dose must be repeated as above. In very adynamic cases, if the sweating threatens to prove exhausting, nourishment, in the shape of beef-tea, with the addition of Liebig's extract, and some wine or brandy of good quality, may be required."

* This is composed of:
Raisin-pulp and Turpentine, āā 24 drachms; Myrrh and Lemon-grass, āā 12 drachms; Calamus, 9 drachms; Cinnamon, 4 drachms; Bdellium, Spikenard, Cassia [?], Cyperus, Juniper-berries, āā 3 drachms; Trefoil Acacia (*Anthyllis Hermanniæ* L.), 2½ drachms; Saffron, 1 drachm; Honey and Cretan Wine, āā q. s. The Bdellium and Myrrh should be reduced to the consistence of honey, with the aid of the wine; then they are to be mixed with the raisin-pulp and turpentine and the whole to be triturated with honey. Then all the rest, reduced to a fine powder, is to be added and mixed with stirring. The mass is to be made into troches, which are to be dried in the shade and preserved.

No. 428.—**Violet Powder** (M. S., Detroit).

Powdered starch	1 pound.
" orris root	3 ounces.
Oil of lemon	20 drops.
" " lavender	10 "
" " cloves	5 "

Triturate well together, and sift through a fine sieve.

No. 429.—**Essence of Beef** (M. S., O.).

By using the following formula, you will be able to make a supply ahead at one operation: Chop fine 1 pound lean beef, place it with ½ pint water into a bottle which they will only half fill, and agitate briskly for half an hour; then throw the whole on a sieve and receive the liquid in a jug. Next, boil the undissolved portion in 1 pint of water for twenty minutes; strain and mix the decoction with the cold infusion; evaporate the liquid to the consistence of thin syrup, adding spice, salt, etc., to suit the taste, and pour the essence while boiling hot into bottles or jars, or (still better) tin cans, which must be closed air-tight, and kept in a cool place.

If the boiling liquid were to be poured into cold bottles, there would be a great risk of the bottles breaking, involving probably the loss of the contents. To prevent this, place the bottles into a wide pan with sufficient cool water to reach nearly to the top of the bottles; pour sufficient water into each bottle to prevent it floating, and then let the water in the pan be brought gradually to a boil. As each bottle is to be filled, take it out of the pan, empty the water out of it and fill it immediately.

No. 430.—**Eau Medicinale d'Husson** (A. H. H., Cleveland).

It is prepared, according to Dr. Williams, from the juice of colchicum flower, with half the quantity of brandy; mix, and, after standing a few days, decant into small bottles. In place of this uncertain preparation, it is customary to supply the Vinum Colchici (1 : 10) of the German Ph., or, according to *Dorvault*, a wine prepared from 60 parts of colchicum root and 125 parts of Sherry.

Experience of a Public Analyst.—Not long ago a farmer applied to a German chemist who acted as public analyst, to analyze some wine for him, which he had reason to believe have been tampered with, and of which fact he desired to have a legal proof. He stated that this particular lot of wine had been excellent until he arrived at the six last bottles. These were found to be undrinkable. The chemist being invited to assure himself of this fact, tasted the wine and found it most abominable. Things having progressed thus far, the farmer remarked that he could aid the chemist in finding out the difficulty, by stating that the same thing had happened to several invoices of wine he had received, and that a servant of his, out of revenge, had drank part of the contents of six bottles, and had replaced the deficit by. . . . (the same wine second-hand).

Consumption of Quinia in the Russian Army.—The Russian military hospitals have consumed during the year 1877 6,000 kilos of quinia sulphate, and 3,000 kilos of quinia muriate, together 317,440 ounces.

Ptomaine is the name applied by F. Selmi to the poisonous organic alkaloids which are generated in human bodies after death. The name is derived from πτῶμα, *ptoma*, "the fall; *the cadaver*."

PRESCRIPTIONS AND FORMULÆ.

Tape-Worm Remedy.—
A correspondent of the *Boston Medical and Surgical Journal* sends to it the following formula as appearing in a quackish pamphlet which is being circulated. A purge at night. Three or five grains of calomel in the morning. Immediately afterwards four or eight ounces of an infusion of pomegranate root (prepared by pouring a quart of cold water over half a pound of the root and boiling down to a pint) is given, and repeated in two or three hours if not effective. Should the worm be only partially expelled, an enema of salt and water is used. Nausea is prevented by sucking a lemon. Fasting is prescribed from the beginning of the treatment until after the expulsion of the parasite.

Boracic Acid Ointment.—
This ointment is used in University College Hospital, as an application for burns, and is made according to a formula of Mr. Godlee, as follows:

Boracic acid in fine powder	1 part.
White wax	1 part.
Paraffin	2 parts.
Almond oil	2 parts.

Melt the wax, paraffin, and oil, with a gentle heat; then add the acid, and continue stirring until it remains of uniform consistence. Before using, it should be reduced to a soft mass by rubbing it in a cold mortar.

Black Finish for Brass.—
Optical and philosophical instruments made in France often have all their brass surfaces of a fine dead black color, very permanent and difficult to imitate. The following, quoted by us from *the Photographic News*, is said to be the process used by the French artisans:—Make a strong solution of nitrate of silver in one dish, and of nitrate of copper in another. Mix the two together, and plunge the brass into it. Remove and heat the brass evenly until the requisite degree of dead blackness is obtained.

Remedy for Poison-Oak Eruption.—
Dr. Q. C. Smith sends to the *Pacific Medical and Surgical Journal* the following formula for use in this affection:

℞.	Acid carbolici	ʒ ss.
	Ol. sassafras,	
	Ol. juniperi	āā ʒ i.
	Ung. zinci oxidi (benz.)	ʒ i.

M. Apply from two to four times daily, and before going to bed wash the inflamed part thoroughly with warm water and soap.

Cod-Liver Oil with Strychnia.—

Glyconin	ʒ ij.
Oil bitter almonds	gtt. v.

Mix; add to this slowly, with agitation:

Cod-liver oil	fl. ʒ viij.

Between the successive additions of cod-liver oil, add the following mixture:

Strychnia	grain i.
Distilled water	fl. ʒ ij.
Jamaica rum	fl. ʒ iv.

(T. D. McElhenie's formula.)

Syrupus Morphiæ Compositus. (*Jackson's Cough Syrup.*)—

℞.	Ext. ipec. fluid	fl. ʒ ss.
	" rhei fl	" ʒ iv.
	" senegæ fl	" ʒ iij.
	Syr. simpl	" ʒ xxxi.
	Morphiæ hydrochlorat	gr. viij.
	Ol. sassafras	gtt. xxxij.

(Cincinnati College of Pharmacy).

Syrupus Scillæ.—Take 2 oz. of powdered squills; moisten them to a thin paste with a mixture of 2 fl. oz. of acetic acid and 30 fl. oz. of syrup; allow to macerate and swell during four hours. Then pack the squills into a glass percolator, in the neck of which a piece of wet sponge is placed; cover the surface with paper, and pour on the rest of the liquid. Finally, add 3 fl. oz. more of syrup, and, finally, enough water, until 32 fl. oz. of finished syrup are obtained.—*Am. J. Pharm.*

Unguentum Sulphuris Alkalinum (North-west. Dispensary).—

℞.	Sulphuris	ʒ ij.
	Potass. carbonat	ʒ i.
	Adipis	ʒ ij.

Mistura Rhei Composita (Brooklyn Eye and Ear Hospital).—

℞.		in 1 teaspoonful.
	Ext. rhei fl. 256 min.	1 min.
	" ipecac fl. 51 min.	⅛ min.
	Sodii bicarbon. 512 grs.	2 grs.
	Glycerinæ 12 fl. ʒ	⅜ fl. ʒ
	Aquæ menth. pip. 32 fl. ʒ	⅜ fl. ʒ about.

Mix. Dose: one-half to one teaspoonful two or three times a day.

The above combination is used largely for children whose stomachs and bowels are out of order, where there may be a question whether a slight mercurial would not do well. It has an alterative action, and in this way is truly a tonic. Adults also receive it. The mixture is prepared for the hospital by Dr. Squibb.

Ferrated Cod-Liver Oil.—H. Kallbrunner recommends the following formula:

Four grammes of "alcoholized iron" (finely divided metallic iron, in place of which pure reduced iron may be used) are rubbed to a paste with a very small quantity of water; 200 grammes of brown cod-liver oil are poured upon it, and the whole digested for thirty-six hours.

Brown cod liver-oil is better for this purpose than the pale-yellow, as the former is somewhat acid, and dissolves a larger quantity of iron. Without the addition of water, scarcely traces of iron are dissolved.

Koumis.—This formula is given by Dr. McKelway in the *Medical and Surgical Reporter:*

Best unskimmed milk, one quart: yeast (brewer's or old baker's), one hundred grains; cane sugar, two hundred grains. Mix and keep it at 80° Fahr. until fermentation is brisk, stirring it frequently, then bottle and secure the corks with wire or stout cord. In twenty-four hours it may be used.

Root Beer.—Take one ounce each of sassafras, allspice, yellow-dock, and winter-green; half an ounce each of wild-cherry bark and coriander; one-quarter ounce of hops, and three quarts of molasses. Pour boiling water on these ingredients and let them stand for twenty-four hours; filter the liquor and add half a pint of yeast, and it will be ready for use in twenty-four hours.

Ginger Ale.—Ginger sliced, one ounce, a teaspoonful of essence of lemon, three-quarters of a pound of white sugar, six quarts of boiling water; infuse the ingredients in the boiling water till cold, then strain and ferment it with three or four spoonfuls of fresh yeast, and bottle.

Another Method.—Sliced ginger, one ounce; dried orange peel, one-half ounce; tie them up in a piece of muslin and boil with eight quarts of water, strain, and add one ounce of citric acid, a teaspoonful of essence of lemon, and one and a half pounds of white sugar; when cold, add two table-spoonfuls of yeast, let it work for twelve hours, and then bottle it.—*Confectioner's Journal.*

Shampoo Lather.—Cut 2 lbs. best oil-soap into dice; place them in an earthen pot with water and a little crystallized soda. Boil over a slow fire. After skimming, the soapy mass may be perfumed and colored to suit the ideas and taste of those concerned.—*The Perfumer's and Hairdresser's Gazette.*

Formulas of Secret Medicines.

[Continued from the London *Chemist and Druggist.*]

Familiensalbe—Family Ointment (Göring).—16 grammes of a hard yellow salve in a round box; a mixture of 9 parts wax, 3 parts fat, 2 parts turpentine, 2 parts inspissated juice of *Ornithogalum scilloide* Jacquin, or *O. candatum* Aiton. These plants are known to the public as Meerzwiebel (sea onion or squill), but they are only related to that plant in appearanee. This salve cures everything. Blessed is he who believeth!—*Hager.*

Dr. Pierce's Favorite Prescription for the cure of those chronic weaknesses and complaints peculiar to females. 280 grammes of a turbid greenish-brown fluid with a bulky deposit of the same color, made according to the following recipe:—Savin tops, 10 grammes; larch-agaric, and cinnamon, of each 5 grammes; China Jaën (ash cinchona bark), 10 grammes; boil with sufficient water to make 220 grammes when strained. Dissolve in the filtrate gum arabic, 10 grammes; white sugar, 5 grammes; and add tinct. digitalis and tinct. opii, of each 2 grammes; star anise oil, 8 drops; 90 per cent spirit, 45 grammes.—*Hager.*

Silesian Extract of Fennel Honey (L. W. Eggars, Breslau.)—Clarified honey, 500 grammes; malt syrup, 1,000 grammes; fennel oil, 5 drops.—*Hager.*

Feuerlöschpulver—Fire-extinguishing Powder! (Bucher, Leipzig).—Nitre, 59 parts; sulphur, 36 parts; coal, 4 parts; iron oxide, 1 part.—*Wittstein.*

Feytonia—the best Cure for Toothache.—A solution of camphor, 1 part, in cajeput oil, 2 parts; chloroform, 4 parts, with a trace of clove oil.—*Hager.*

Fichtennadel-Brustzucker—Pine-needle Pectoral Sugar (L. Morgenthau, Mannheim).—For irritable cough, hoarseness, tightness of the chest, asthma, stubborn lung affections, chronic catarrh, etc. Little sticks of bonbon, containing a very little opium, and wrapped in tinfoil.—*Hager.*

Fichtennadel-Tabak—Pine-needle Tobacco (L. Morgenthau).—Is said to be patented in England. Ordinary tobacco moistened or sprinkled with a weak spirituous solution of wood wool extract and wood wool oil* and dried; made up in cigars for smoking. The specification that 30 lbs. of extract, 27 lbs. of essence, and 1 lb. of oil of the pine-needles, are used in the preparation of 1 cwt. of tobacco, is a palpable falsehood.—*Hager.*

James' Fever Powders, also called *James' Powder and Pulvis Jacobi.*—It consists essentially of phosphate and antimoniate of lime with free antimonic acid.

Fever-Stone—Lapis Anti-febrilis—Fieber Stein.—Lead oxide, 54 parts; arsenic acid, 46 parts; melted together.—*Winckler.*

C. Warburg's Vegetable Fever Drops (London).—Camphor and aloes, 2½; orange peel, 10; elecampane root, 12; digest with 90 per cent spirit, 240, mixed with ac. sulphuric. dil. 24. To the tincture add quinine sulphate, 9; tinct. opii crocata, 2½.—*Ragsky.*

Five-minute Fragrant Pain-curer (Dr. Walter Scott, New York.)—A remedy to remove all kinds of pain in five minutes. A clear, colorless fluid, containing ether, 6 grammes; glycerin, 21 grammes; common salt, 3.4 grammes; distilled water, 170 grammes.—*Hager.*

Flechtenkapseln—Tetter Capsules—or Dr. Berkeley's Antiherpetic Capsules for Skin Diseases, Tetter, etc. Capsules filled with tar.—*Hager.*

Flechtenmittel—Tetter Cure (Paris).—1. A Washing Fluid.—Common water, containing 1½ per cent sulphuric acid. 2. A Salve.—A mixture of lard and spermaceti, with ¼ of their weight of calomel.—*X. Schmidt.*

Flechtenpulver—Tetter Powder (St. Lube's, France).—Nitre, 100; antimony chloride, 10; antimony oxide, 200 to 1.5 grammes for each application.—*Wittstein.*

Flechtensalbe—Tetter Salve (Fontaine, Paris).—For all skin diseases. Olive oil and white wax, with 1/16 of white precipitate.—*Wittstein.*

Flechtensalbe (Bruno, Reichel, Apolda).—A mixture of wax and lard colored green.—*Schädler.*

Flechtensalbe (F. Schwartzlose, Berlin, and S. G. Schwartz, Breslau.—For salt-flux, tetters, and similar skin diseases. Peru balsam, 1; carbolic acid, 2; yellow wax, 10; lard, 30.—*Schädler.*

Flechtensalbe (Surbi, Paris).—For all kinds of skin diseases. A mixture of beef tallow, 30; olive oil, 10; zinc oxide, 2; steatite, 2.—*Wittstein.*

Flechtenseife (Dr. Berkely)—TETTER SOAP.—Ordinary tar soap.—*Hager.*

Flechtenwasser.—"The wonderful wholesome mineral vegetable tetter-water" (Dr. A. von S.). Corrosive sublimate, .25 grammes; water, 180 grammes; benzoin tincture, 6 grammes.—*Weber.*

Fleckenwasser (Bronner).—Cleansing fluid (literally spot or stain water) for the removal of grease or dirt spots. Benzine only.

Englisches Fleckenwasser.—English cleansing fluid for removing acid, resin, wax, tar, and grease spots. A mixture of 95 per cent alcohol, 100 grammes; liq. ammon., sp. gr. .875, 30 grammes; benzine, 4 grammes.—*Artus.*

Eau de Vie Alimenteuse—Fleisch-Extract-Liqueur—Extract of Meat Liqueur Aqua Vitæ Incarnativa (A. Hensel, Berlin).—A beautiful red, spicy liqueur, leaving, when distilled, 32 per cent of solid matter. This residue contains, in 100 parts (besides aniline-red) resin and extractive (partly from ginger and partly from cinnamon), 3½; sugar, 27½; extract of meat, 1¼.—*Hager.*

Fleisch-Extract-Syrup—Syrup of Extract of Meat (Meyer, Berk).—Blood-serum made into a syrup with sugar.—*Hager.*

Fleischfaser-Zwieback für Hunde—Fibrin Dog Biscuits (New York).—Said to be made of pure meal, fibrin, dates, and other ingredients, and recommended as an excellent food for dogs. According to the prospectus, its use makes all other foods unnecessary, as it gives the animals peculiar endurance, strong muscles, and sound bones. The directions for use say that it is most advantageously given in its unprepared form, as dry, heavy, hard cakes, and only in case it is refused should it be softened for a short time in cold water. According to the analysis performed in the laboratory of the Poppelsdorf Agricultural Academy, the proportion of nitrogenous to non-nitrogenous ingredients is 1 to 3.70. Microscopic analysis detects the presence of dried fibrin, and also a considerable admixture of structureless hyaline cartilaginous matter. From this it follows that the nitrogen revealed by analysis does not all represent protein or fibrine, and that the proportion which arises from indigestible gelatinous matter will be of smaller value.—*Dr. E. Kern.*

Fliegenpapier, Giftfreies—Non-Poisonous Fly-Papers. (Bergmann & Co., Rochlitz).—Contains abundance of arsenious acid.—*Hager.*

Fliegenpulver—Fly-Powder (Baumann, now Markel, Austria).—93 to 94 per cent of dry sandy ferruginous clay (ordinary loam) saturated with a decoction of some bitter substance, as quassia or gentian.—*Hager.*

Flöhemittel—Flea-Powder (Leipsic).—Powdered soap.—*Fisher.*

Flöhewasser—Flea-water (Koch, veterinary surgeon, Vienna).—7 brandy, 1 benzine, 1 black soap.—*Hager.*

Floriline—Vegetable Tooth-Paste (made by John Yates) (Albin Müller, Brünn).—It is contained in a quadrangular china pot, and is a red, dry, rather hard mass, made from prepared chalk, 20 grammes; starch powder, 10 grammes; glycerin, 8 grammes; pellitory tincture, 3 grammes; peppermint oil, 10 drops, and water, q.s., colored with Florentine lac.—*Hager.*

Fluid-Ozon (J. Krohn, Munich, with a certificate from Justus von Liebig).—A mouth wash and toilet water. An aqueous solution of permanganate of soda, 1 in 9, contaminated with traces of sodium sulphate and chloride.—*Wittstein.*

Gallen-Mixtur—Gall Mixture (Ph. Barth, Marburg in Steiermark).—The same preparation as the above, colored with ¾ per cent of dragon's blood.—*Wittstein.*

* Extract and Oil made from the leaves of the Scotch Fir: *Pinus sylvestris* L. See also NEW REM., Jan., 1878, p. 9.

Frog-Ointment or Thrush Mixture.—Brown syrup, 90 grammes; verdigris, 6 grammes; strong acetic acid, 10 grammes; solution of perchloride of iron, 2 grammes.—*Hager.*

Frostbeulentinctur, Frostbeulenwasser—Chilblain Tincture, Chilblain Water.—Manufactured by a chiropodist of Munich. It is a solution of 2 grammes zinc sulphate in 60 grammes water.—*Wittstein.*

Frostsalbe—Frost Ointment (Wahler, Kupferzell).—Mutton tallow, 24; hog's lard, 24; iron oxide, 4; heat in an iron vessel, stirring continually with an iron rod until the whole has become black; then add 4 parts Venice turpentine, 2 part bergamot oil, and two parts Armenian bole, robbed smooth with olive oil.

Fürstenbalsam, Bamberger, für Frauen — Bamberg Prince's Balsam for Women.—An embrocation for strengthening women after confinement. A hexagonal Eau de Cologne bottle, containing about 100 grammes of a clear reddish-brown fluid, which is a filtered mixture of equal parts of spirits of lavender (Sp. lavand. co.) and spirit of soap, mixed with a little camphor and ammonia.—*Hager.*

Galène-Einspritzung—Galen's Injection (J. F. Schwarzlose Söhne, Berlin).—According to Hager:—Gum arabic, 25 grammes; water, 65.5 grammes; sugar of lead, 4.5 grammes; tinct. opii with saffron, 5 grammes. According to Schädler:—Sulphocarbolate of zinc, 3 grammes; gum-arabic, 20 grammes; tinct. opii, 2 grammes; water, 100 grammes.

Gallen-Mixtur für Pferde—Gall (or *antibilious*) *Mixture for Horses* (F. Barth, veterinary surgon, Freibach-by-Altenhofen, Carinthia).—A clear decanted solution of 8 parts wood tar in 92 parts common kienöl (ol. pini).—*Hager.*

Gallen-Tinctur—Gall Tincture (Dr. G. Krieger, Garz).—5 parts wood tar, ten parts water, 30 parts spirit, 1 part corrosive sublimate, and $\frac{1}{10}$ part rosaniline, mixed with a gentle heat, allowed to deposit, and filtered.—*Hager.*

Gastrophan (Apotheker J. Fürst, Prague). — For strengthening the digestion and improving the appetite. Quassia, 30 grammes; orange berries, 15 grammes; galangal, 4 grammes; cardamoms, 2 grammes; star anise oil, 10 drops; orange peel oil, 10 drops; spirit, 180 grammes; water, 120 grammes; digested and filtered.—*Hager.*

Gastrophile (Dr. Borchard).—There are several varieties of this preparation. Soda water, containing common salt, perhaps, in some of them, mixed with Glauber's salts.

Gedächtniss-Limonade—Mnemonic Lemonade (manufactured by G. M. Raufer, Vienna).—A mixture of 15 parts phosphoric acid, 15 parts glycerin, 70 parts water.—*Shädler.*

Gehör Instrument—Instrument for Deafness (Apotheker F. Brunner, Troppau).—A little tube of siver plate, 2 centimetres long and as thick as a straw, with a small mussel-shaped widening at one end, which is wrapped in cotton wool, to be inserted in the ear.

Schweizer Gehör-Liqueur—Swiss Cure for Deafness (Raudnitz).—Water mixed with a little coarse brandy.—*Wittstein.*

Gehöröl—Oil for Deafness (C. Brockelmann, Soest).—Provence oil, adulterated with sunflower oil, and mixed with very small traces of camphor and cajuput, sassafras and rosemary oils.—*Hager.*

Substitutes for Box-wood.—Since the outbreak of the Russo-Turkish war, the supply of box-wood for wood-cutters and for the manufacture of (weaving-) shuttles, from the Russian provinces of the Black Sea has decreased so much that other woods had to be searched for to supply the deficit. The best substitutes so far found are the wood of the American dog-wood and persimmon (*Cornus Florida* and *Diospyros Virginiana*), which, however, must be very slowly dried artifically, to make them serviceable.

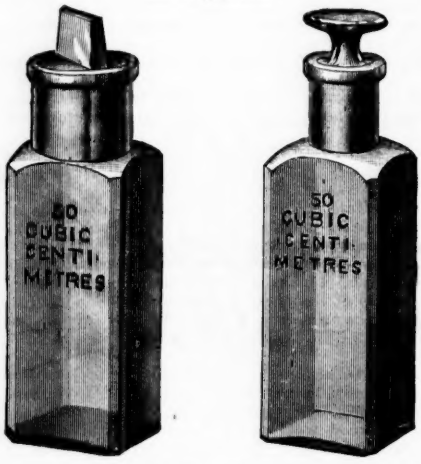
Trimethylamia or **Pseudo-propylamia** is now manufactured in large quantities from beet-root mash. The dealers in chemicals in Europe sell the article promiscuously under the names *Propylamine* or *Trimethylamine.*

NOVELTIES.

PERSONS *having* NEW *inventions, processes, and novelties which they may wish to bring to the notice of readers of* NEW REMEDIES, *can do so through this column by forwarding (when it is possible to do so) a sample to the* EDITOR, *accompanied with a suitable illustration, when one is needed to give an adequate idea of the thing described. If it is desired, cuts will be made at the expense of the person furnishing the sample.*

It will be understood that such notices are to be gratuitous; based solely on the merits of the articles submitted, and published as matters of general interest to the readers of the Journal.

All samples and communications must be received before the fifth of the month.



Fox & Sons' Metric French Square Prescription Vials.

AMONG many pharmacists doing a prescription business, the use of glass-stoppered vials is becoming common; improvement in the appearance of the package being thought sufficient to warrant the increased expense. Those who use glassware of this sort, and others who desire vials made according to the metric system, can now be supplied with an article in every way commendable, by H. C. Fox & Sons, of Sutherland Avenue, Philadelphia, whose metric glassware has been adopted by the Marine Hospital Service of the Government.

The adjoining illustrations represent two styles of stoppers, and the general appearance of the square prescription vials.

It is to be hoped that the use of these vials will be favored by all who take an interest in hastening the introduction of the metric system. Messrs. Fox & Sons furnish them at prices, according to sizes, from $10 per gross, in the case of vials holding 10 cubic centimetres (2¾ fl. drachms), to $45 per gross, for those holding 1,000 cubic centimetres (33⅞ fl. ounces). This list of sizes now numbers twenty, of which the above-mentioned are the limits, but they will furnish other sizes and designs as rapidly as there is any demand to justify them in doing so, and will insert the name and address of purchaser, at moderate cost, when it is wished.

As the capacity of each vial is indicated on its surface, it will serve as an object lesson for all who have occasion to use it.

Patent Nursing-Tube Cleaner.

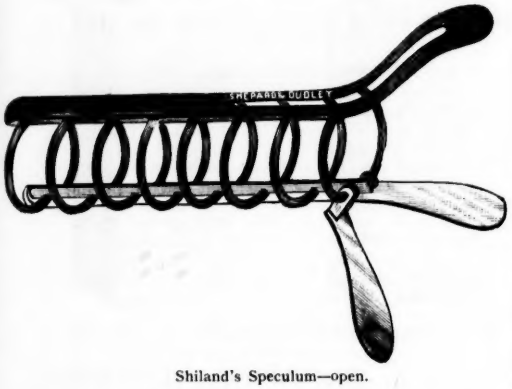
KIDNEY AND FARLESS, 308 E. 19th St., New York,

manufacture a device for cleaning nursing-bottle tubes, which consists of a tinned iron wire, having a ring formed at one end and a thread cut on the other end for a distance of about five inches, thereby making a sort of file, with which the interior of the india-rubber tube can be thoroughly scraped. A bit of flannel fastened to the extreme end forms a sort of swab, by means of which the matter detached in the to-and-fro movement of the wire can be more effectually removed. This appliance is likely to be more effectual than a bristle-brush, and will, without doubt, both outwear and wear out a number of tubes before it becomes useless.

Shiland's Ring-Folding Speculum.

A. SHILAND, M.D., of Troy, has patented* a speculum, illustrated in the adjoining figures, which show pretty clearly its mode of construction and the way in which its dilatation is accomplished.

The instrument differs in no essential degree from one invented by Dr. Cusco, of Paris, figured in the catalogue of M. Charrière, the well-known maker of instruments, published in 1862, and a copy of which we reproduce.



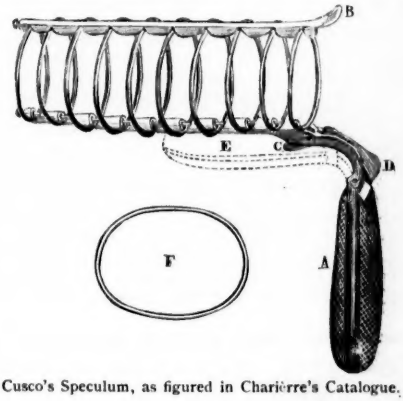
Shiland's Speculum—open.

Indeed, it will be seen that the instrument of Dr. Cusco has this advantage over that of Dr. Shiland, that, in the former, on the withdrawal of a pin from the end of each longitudinal bar, the rings are set free, and can be easily taken out and cleansed, while the joints of the latter can only be surely cleaned from mucus and other soiling matter, by subjecting the instrument to a high temperature, as directed by Dr. Shiland, viz., by burning alcohol on it after using a brush and soap. Not the least of the disadvantages of this speculum is the certainty, almost, of pinching the vaginal walls between the rings in withdrawing it; next to this, that its blades are dilatable to such a very limited extent. The advantages which it has over a "Ferguson," in permitting the vagina to be seen, is not great, since the diseases of the vagina in which a speculum is used, either for diagnosis or treatment, are few compared with those of the uterus; while Dr. Shiland's instrument completely lacks the light-reflecting capacity of the "Ferguson" speculum, which renders the latter so valuable in the treatment of diseases of the upper part of the vagina and the vaginal portion of the uterus. On the other hand, any one who has a "Ferguson" instrument can very quickly get a view of the vaginal walls much better than Dr. Shiland's speculum could possibly give, by cleaning the japan and tin-foil off from one side of the former for one-third or one-half its circumference, leaving the ballance to act as a reflector. The mucous membrane will then be clearly seen through the uncovered glass, and by withdrawing the instrument until the seat of any disease is uncovered, applications can easily be made.

Moreover, Ferguson's instrument has a beveled end, which enables the examiner to rotate it, so as to bring a displaced cervix better into view, a feature not possessed by the speculum under consideration. It is evident that

Shiland's Speculum—nearly closed.

Dr. Cusco's instrument never gained for itself any considerable reputation, and, despite Dr. Shiland's opinion that *his* "possesses all the advantages desirable in a perfect speculum," the indorsement of Doctor Brinton of its "serviceableness," the opinion of Professor Vanderveer, that "it is superior to many now in use;" and of Prof.



Cusco's Speculum, as figured in Charrière's Catalogue.

Boyd, Jr., that it is "perfectly satisfactory," etc., etc., we think that Dr. Shiland's invention will quickly meet the fate of its congener, and that in another fifteen years it may be just as unknowingly invented again, and patented, too, for that matter.

Laxatine.

"A TASTELESS Regulator and Lozenge Laxative.—A saccharated compound of calcined magnesia (hydrated), containing traces of potassa, sulphur, soda, and wine acid. The best preparation of magnesia made into delightfully flavored lozenges, being one of the most useful and reliable of known laxative medicines, suitable for all ages and conditions, etc.," etc., etc.

When we read over the remarkable statements uttered by the manufacturers of remedies of this class, regarding their almost unlimited adaptability to the relief of all human ills, we rejoice that Artemus Ward has gone to his rest without having to suffer the mental agony of seeing his own efforts in the way of patent medicine advertisements eclipsed. Why the future revisers of our pharmacopœia need to trouble themselves about other peristaltic persuaders, now that "Laxatine" has been discovered, if all that is claimed for it is true, will be quite incomprehensible.

* Patent No. 196,600; granted Oct. 30th, 1877.

The Paragon Lung Protector.

SOME years ago, we saw at a Mediterranean health-resort a "chest protector" in common use in that locality, made of flannel, without sleeves, and closed in front with buttons for its whole length, which came nearer to what is needed by persons who require extra protection for the chest than anything we have seen, until we recently had an opportunity to examine the "Paragon Lung Protector" made by W. A. Hoyt & Co., of 72 Church Street, Boston, and illustrated by the adjoining cut. Unlike the flaps of sheepskin or flannel commonly used, it covers the whole chest, the sides only being open for a little way to admit the introduction of elastic bands which keep it snugly applied. Its inside is red flannel; the outer layer, chamois leather. Worn outside a light under-vest it will be essential, not only for persons who have sensitive lungs and bronchial tubes, but for gentlemen who have occasion to wear an open-breasted evening suit in our northern States and Canada; and ladies who require an addition to the garments covering the chest which shall insure warmth without being clumsy will find it quite as valuable.

It is now time to be arranging for fall and winter stock of this nature, and the merits of the "Paragon" are very well worth consideration.

T. P. Spencer's Perfumes.

T. P. SPENCER, of 61 Hudson St. (formerly at 299 Broadway), one of the oldest and best-known manufacturers of perfumes in the market, has recently introduced two new varieties among the long list of odors which he prepares, viz., "Cassie Flowers" and "Stephanotis." A characteristic feature claimed by him for his perfumes is that the packages are nearly double the size of others sold, like them, at 50c. each, while the price at which they are offered to the trade is similarly attractive. Mr. Spencer warrants his perfumes to be equal in quality to any extracts sold.

Ricksecker's "Perfection Tooth Persuader."

THIS is a baby's toy made of some black substance of light weight, and having a flat disk to be "mumbled" and bitten upon by the teething infant; a transverse piece to prevent its being quite swallowed, and a ring for the attachment of a suspending cord.

We are not disposed to favor "persuaders" of this character. A reasonable amount of rubbing with the soft end of a nurse's finger may be a very soothing application to an irritable gum, but a hard affair like this seems to us more likely to increase the trouble than relieve it; in the same way that scratching in eczema or the itch, however temporarily satisfactory, is not likely to better matters in the long run.

Camphenyl.

THIS is a fluid preparation, having an odor of camphor modified by that of phenol, and said to be a product of coal-tar and camphor. It is made by D. E. Becker, of Philadelphia, who recommends it for use in full strength as a dressing for wounds or ulcers, and to be taken internally (in the form of emulsion [?] with eight parts of water and two of sugar), in doses of three to ten drops. The particular affections for which its internal use is valuable are not enumerated, and as we are quite unaware of the essential composition of the article, we do not feel authorized in giving it more favorable notice.

Johnston's Fluid Beef.

IT is becoming pretty generally known that beef-teas and the beef-extracts made by the Liebig method contain little else than the soluble elements of the flesh, and that, while they serve a purpose as stimulants, their nutritive value is very slight.

Johnston's Fluid Beef is a patented article, purporting to contain, not only the elements possessed by the beforementioned preparations, but having also the entire nitrogenous constituents as well. The size of the package leads us to doubt somewhat if this can be the case. In the form of a pasty mass it certainly appears to contain relatively nearly as much water as the fibre of flesh. Whatever may be the proportion of finely ground fibre it contains, the presence of this element, in *any* degree, is likely to render it more valuable as a food than preparations which possess the soluble portions of flesh only; and it is, therefore, well worth a trial in cases where meat-extracts are commonly used.

NEW PATENTS.

[*The following list is compiled from official sources, especially for* NEW REMEDIES, *by S. H. Wales & Son, Solicitors of Patents, 10 Spruce St., New York, who will furnish gratis to subscribers any information relating to this department.*

TRADE MARKS REGISTERED DURING MAY, 1878.

Medical Preparations.

5,995. Sterling C. Buchanan, Camden, Ark. The representation of a buck having horns or antlers.

5,999. J. M. Keyon & Son, Medford, Mass. The fanciful and newly-coined word "Crinogen."

6,000. Darius Stone Orton, Northampton, N. Y. The representation of the stag, with mountains in the background.

6,005. Nathaniel S. Driggs and Winfield S. Lynn, Indianapolis, Ind. The Brazilian coat-of-arms, and the word "Brazilian."

6,025. John E. Butler, Golconda, Ill. The fancifully formed word "Hemorrhoidine."

6,030. Nathan Barnes Fletcher, Lynn, Mass. The representation or picture of a standard or staff, and a flag applied thereto, and arranged as shown.

6,035. Denison Smith, Philadelphia, Pa. The fanciful word "Arbozlinctus."

6,037. Giovanni N. Miles, Stockton, Cal. The word-symbol "Buhach."

6,038. Z. L. & D. S. Riker, New York, N. Y. The word "Excelsior" inscribed upon a banner, carried by a man ascending a mountain.

6,041. Chesebrough Manufacturing Company, New York and Brooklyn. The arbitrarily selected word "Vaseline."

6,043. John E. Hetherington, Cincinnati, O., and New York, N. Y. The compound word-symbol "Tropic Fruit."

6,050. Quincy A. Scott, Pittsburg, Pa. The words "White Gold," a purely fanciful designation.

6,052. Weikel & Smith Spice Co., Philadelphia, Pa. The word-symbol "Ready Soap Maker."

6,054. Howe & French, Boston, Mass. The word-symbol "Manhattan."

6,055. J. Saxon Taylor, San Francisco, Cal. The word symbol "Champagne."

6,059. Eugene A. Du Puy, Brooklyn, N. Y. The words, figures and devices following, namely, "The Helvevetic Man'f'g Co." in Roman capitals, arranged in a circular form, within which circle is a laurel wreath inclosing within it a Greek cross.

6,062. Egyptian Embalmer Company, New York, N. Y. The fanciful word "Egyptian."

6,069. George G. Kennedy, Boston, Mass. The fanciful title "Prairie Weed."

6,070. George A. Kellogg, Brooklyn, N. Y. The newly coined word or word symbol "Freckline."

6,072. London Manufacturing Company, New York. The word-symbol "Purissima," used in connection with the words London Manufacturing Company.
6,073. David Marshall, Carthage, Ind. A representation of a human hand.
6,075. Gerrit Norton, New York, N. Y. The arbitrary word "Woosterine."
6,077. Partridge Brothers, Augusta, Me. The letters and word-symbol "U. S. Gold," and "U. S."
6,080. Julien Vergnole, New Orleans, La. The representation of a Eucalyptus tree.
6,081. Maranda C. White, New York, N. Y. The pictorial representation of a white elephant, used in connection with the arbitrarily-selected words "White Elephant."
6,085. Clin & Co., Paris, France. A circular medallion bearing upon its face a representation of a human figure leaning upon a club, with a second human figure lying upon a couch in the background, as shown.
6,087. P. H. Kelley, Indianapolis, Ind. A fac-simile of Goddess of Liberty side of silver quarter dollar piece, coinage of 1831, with the initials "P H K" in small Roman letters at base of vignette, instead of the date.
6,093. New York Chemical Works, New York, N. Y. The arbitrarily-selected word "Kalye."
6,097. Caswell, Hazard & Co. New York, N. Y., Newport, R. I. The word symbol "Peptonized."
6,098. Henry Halkelt de Petferren, New York, N. Y. The figure of a man in clerical costume, with a medal, bearing a cross on his breast, and the words "The Father Mathew Remedy."
6,103. Relief M'f'g. Co., New York, N. Y. The word symbol "Relief."
6,106. William H. Whitney, New York, N. Y. The word-symbol "Windsor Pharmacy."
6,107. Chas. R. Burrage, San Francisco, Cal. The word "California," and the representation of the root as shown.
6,110. William S. Powell, Baltimore, Md. The arbitrarily selected letter "P."
6,113. Richard Van Buskirk, Peekskill, N. Y. The word-symbol "Teetotal."
6,114. Atkins, Hertel & Co., Baltimore, Md. The words "De Witt's Electic."
6,115. Thomas S. Bradfield, La Grange, Ga. The fanciful title "The Sufferer's Balm," and the fac-simile of my signature.
6,120. Robertson F. George, Galveston, Tex. The arbitrarily selected words "French Border."
6,121. Hagerty Bros. & Co., New York, N. Y. The word-symbol "Peerless."
6,125. Alice C. Simpson, Danville, Cal. The word-symbol "Australian."
6,136. Carter Bros. and Co., Pittsburg, Pa. The word-symbol "Vienna," and the figure of a crown.
6,137. H. A. De Land & Co., Fairport, N. Y. The representation of a lion shown in the act of rolling a keg.
6,140. Holman Liver Pad Company, New York, N. Y. The fancifully selected word-symbol "Absorptine."
6,147. Abrams & Carroll, San Francisco, Cal. The word-symbol "Royal."
6,149. George W. Frazier, Cleveland, Ohio. The name Dr. Williams and the fac-simile signature of Geo. W. Frazier used in connection with the words "Indian Ointment."

Soaps, Candles, etc.

6,029. Joseph L. Elkinton and Thomas Elkinton, Philadelphia, Pa. The word-symbol "Plantation."
6,160. Ecker & Co., Philadelphia, Pa. The words "Our Forefathers."

LABELS REGISTERED DURING MAY, 1878.

1,511. "Chemical Spirit Gas." L. H. Abrams, Philadelphia, Pa.
1,513. "Beef Tonic." Caswell, Hazard & Co., N. Y., and Newport, R. I.
1,514. "Beef Tonic." Caswell, Hazard & Co., N. Y., and Newport, R. I.
1,516. "Kamillen Seife; Chamomile Soap." Carl D. S. Früh, Philadelphia, Pa.
1,517. "El Boca." Heppenheimer & Maurer, New York.
1,518. "Hill's Creamed Castor Oil." Hill & Buss, Boston, Mass.
1,519. "Fluid Hydrastis." W. S. Merrell & Co., Cincinnati, Ohio.
1,520. "Oil Gem." James B. Medlar, Rockford, Ill.
1,522. "Our Favorite Nursing Shield." John W. Patch, Boston, Mass.
1,527. "Dr. Case's Cough Cordial." P. W. Zeigler & M. W. Case, Phila, Pa.
1,528. "Dr. Case's Liniment and Cancer Cure." P. W. Zeigler & M. W. Case, Phila., Pa.
1,529. "Dr. Case's Liver Remedy." P. W. Zeigler & M. W. Case, Phila., Pa.
1,432. "J. S. Eggleston's Non-corrosive Preparation." Jesse Scott Eggleston, Auburn, N. Y.
1,436. "Dr. Ordway's Sulphur Sarsaparilla." Aaron P. Ordway, Lawrence, Mass.
1,437. "Dr. Ordway's Sulphur Medical Discovery." Aaron P. Ordway, Lawrence, Mass.
1,438. "Dr. Ordway's Sulphur Blood Purifier." Aaron P. Ordway, Lawrence Mass.
1,439. "English Feed for Horses and Cattle." O. A. Swart, Margaretville, N. Y.
1,441. "Amorosis." Schumacher & Ettlinger, New York, N. Y.
1,443. "Malak of Bitters." Alphonse Walz, New Orleans, La.
1,444. "Keeley's French Eau de Cologne." P. H. Keeley, Indianapolis, Ind.
1,546. "Hood's French Cologne." M. C. Hood & Co., Boston, Mass.
1,547. "Hetherington's Tropic-fruit Laxative." John E. Hetherington, Cincinnati, O.
1,548. "Dr. Macalister's Cough Mixture." John P. Lee, Chicago, Ill.
1,549. "Cook's Root and Herb Alterative." Robert T. Stone & John Friend, Petersburg, Va.
1,553. "Angelica Bitters; or, Poor Man's Tonic. George H. Fickardt, Circleville, Ohio.
1,555. "Britton's Ague Pills." F. M. Gooding, Millington, Md.
1,556. "Mrs. Jones' Burn Ointment." Anna W. Jones, Boston, Mass.
1,558. "The Great American Cure and Preventive for Hog Cholera." Beers & Co., Columbus, O.
1,559. "Beauté du Tein. Levy's French Cream." Ben Levy & Co., Boston, Mass.
1,562. "Wallingford's Garget Cure." W. W. Whipple & Co., Portland, Me.

PATENTS GRANTED DURING MAY, 1878.

May 7th.

Battery cells, cap for, W. Boekel	203,405
Bottle-filling apparatus, H. Codd	203,243
Cauterizer, F. A. Stohlmann & E. Pfarre	203,387
Dental engine, J. M. Stebbins	203,385
Dental engine hand-piece, E. T. Starr	203,297
Dental engine hand-piece, E. T. Starr	203,298
Electric machine, magneto-, C. F. Brush	203,412
Electric machines, C. F. Brush	203,413
Gas generator, carbonic acid, O. Zuretusch	203,310
Hog cholera compound, H. R. & W. N. Budd	203,319
Magnet, electro-, H. M. Payne	203,492
Shoulder brace and suspenders combined, N. Van Allen	203,301

May 14th.

Alkalies, apparatus for the manufacture of caustic, E. W. Parnell	203,555
Alkalies, manufacture of caustic, E. W. Parnell	203,761
Dental drill, A. Hartman (R)	8,231

Dental plugger, J. M. Stebbins..... 203,667
Dental tool-holder, W. S. How..... 203,733
Detergent composition, J. Daymon..... 203,712

April 21st.

Bottle-stopper, D. E. Stevens..... 204,105
Dental gold-filling, E. G. & L. Kearsing..... 203,921
Dental tool, E. T. Starr 203,858
Glucose, manufacturing, N. Pigeon..... 203,935
Hydrocarbon from fatty matters, extracting, W. Adamson..... 203,980
Medical compound, C. C. Wainwright..... 203,965
Suspensory bandage, S. E. G. Rawson..... 204,088
Soap, A. H. West..... 204,116
Syringe, flexible, M. Mattson (R) 8,238
Truss, M. M. Macdonald..... 204,060

April 28th.

Acid, recovering waste sulphuric, A. Pénissat... 204,244
Bottle-stopper fastener, L. Kutscher..... 204,341
Sulphur, apparatus for refining, H. H. Eames.. 204,206
Truss, hernial, D. E. Banks & T. M. Merck.... 204,281

ITEMS.

Mr. Frederick B. Power has been awarded the "Ebert Prize," by the committee of the American Pharmaceutical Association, for his essay "On the Rhizome of Podophyllum peltatum, Linn."

A New Coloring Agent.—Tafani, an Italian, mixes a saturated solution of aniline blue with another of picric acid, in the proportion of four parts of the former to one hundred parts of the latter. With this he obtains a beautiful green staining for microscopic specimens.

Tula-Silver.—The beautiful alloy, which has been made for hundreds of years in Tula (properly Niello), Russia, and the preparation of which had remained a secret, has been ascertained to be a compound of 9 parts of silver, 1 part of copper, 1 part of lead, and 1 part of bismuth, which are melted together and saturated with sulphur. The product has the magnificent blue color which is often erroneously called "steel-blue."

Tayuya.—Dr. James Nevins Hyde says, through the *Chicago Med. Journ. and Exam.*, that in order to try the effects of this drug, he has induced a Chicago drug firm to import a case of the dilute tincture (of which the dose is two to twenty drops). He solicits from others who may make a trial of the remedy in syphilis and scrofula, results of their efforts, in order that he may publish them with his own.

Poison of the Salamander.—Stories of the virulence of the "poison" of the salamander, which have come down to us from ancient times, are entirely erroneous. The whole family of Urodelæ, to which the salamander belongs, is quite innocuous, at least to man, although most of them, when exited, eject an acrid juice which is very irritating and may produce local inflammation upon mucous membranes. This juice is capable of destroying small animals, as birds, frogs, etc., and appears to possess toxic properties; but no single animal can furnish enough of this juice do serious harm to larger animals or to man. Albini has found that the portion of the juice soluble in alcohol is more poisonous than the rest; on evaporating the alcoholic solution, fine needle-shaped crystals separate, which are the active toxic constituents, but the composition of which is yet unknown. The ancients assigned to the salamander miraculous properties; it was said to be able to put out fire (Arist. Hist. Anim. 5, 17, 13. Plin. Hist. Nat. 10, 67, 86; 29, 4, 23. Ælian. Hist. Anim. 2, 31); to poison anything it came in contact with, to be born in fire, etc. The Greek and later physicians also mention it, and the Talmud relates many remarkable stories of it, as, for instance, that it is spontaneously generated by burning myrtle-wood for seven years continuously in an oven, etc.

Decisions of the Treasury Department.—The following decisions of the Treasury Department are taken from the *Internal Revenue Record:*

3,473.—*Linseed and Poppy Oils, Duty on.*—The Department decides that linseed and poppy oils specially treated and prepared for artists' use and put up in small vials should pay a duty similar to that imposed on varnishes, viz., 50 cents per gallon, and 25 cents *ad valorem*, instead of 30 cents per gallon on the linseed oil, and free tariff on the poppy oil, as claimed by the appellants, F. W. Devoe & Co.

3,479.—*Ground Myrobolans, Ground Nutgalls, and Ground Indigo, Duty on.*—The Department decides to set aside the appeal of R. Klander & Co. from assessment of duty on the above-mentioned articles, under the provision in the free list for "articles in a crude state used in dyeing or tanning," and to hold ground myrobolans and ground nutgalls subject to duty at the rate of 20 per cent *ad valorem;* they being regarded in the nature of a flour or meal. The question in reference to the proper classification of powdered indigo the Department reserves for further consideration.

3,488.—*Burnt Lump Sienna, Duty on.*—The Department, in the case of McKesson and Robbins, who appealed from the New York collector's assessment of their importation (at 25 per cent ad valorem, classified as a painter's color), and which they claim to be dutiable at the rate of 50 cents per one hundred pounds as an ochery earth, decides that the burning of the sienna does not affect the article in any other manner than to change its color, and does not render it dutiable otherwise than as an ochery earth, and therefore that the collector adjust the entry accordingly, and, if necessary, forward a certified statement for a refund of the excessive duties.

3,493.—*Acetone, Duty on.*—In the case of the above-mentioned merchandise, assessed at $1 per pound, and classified by the appraiser as an ether, but claimed by the importers to be dutiable at 20 per cent *ad valorem*, as an unenumerated manufactured article, the Department decides to treat the article as assimilating to alcohol, and liable to the rate of duty imposed thereon [under Schedule D of the Revised Tariff and Section 2,499 of the Revised Statutes].

3,500.—*Turkey Red, Duty on.*—The claim of S. P. Wetherell, that the above be admitted free of duty, as pure oxide of iron, is rejected, inasmuch as the appraiser reports that the article is not oxide of iron or colcothar in a pure state, but is mixed with earth, and therefore the Department decides to levy a duty of 25 per cent *ad valorem*, and affirms the decision of the Philadelphia Collector of Customs.

3,528.—*Braunscheidt Oil, Duty on.*—The Department regards this article as a proprietary medicine, dutiable at 50 per cent, *ad valorem*, and not as a medicinal preparation not otherwise provided for, and dutiable at 40 per cent *ad valorem*.

3,532.—*Pine Seed, Duty on.*—The article in question appears to consist of the kernel of the pine-tree seed from which the rind has been removed. It is therefore not fit for use as a seed for propagation or cultivation, and does not come within the provision of the free list, exempting from duty the seeds of forest trees. Neither can it be classified as a nut; the proper classification for such article the Department regards as among the non-enumerated manufactured articles dutiable at 20 per cent *ad valorem*.

3,548.—*Spruce Gum, Duty on.*—The Department regards this article as a resinous gum, and therefore subject to a duty of 20 per cent *ad valorem*.

3,553.—*Extract of Nutgalls, Duty on.*—Messrs. J. C. Bloomfield & Co. claim that the article in question is entitled to entry at the rate of 10 per cent ad valorem, as a non-enumerated article bearing similitude in material, quality, and use to extract of indigo and extracts of dyewoods. Referring to the Department's decision on the classification of extracts of Persian berries, the assessment of duty at the rate of 20 per cent *ad valorem* on the merchandise in question is affirmed.